CITY OF CARDIFF.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1910.

EDWARD WALFORD, M.D., D.P.H.,

MEDICAL OFFICER OF HEALTH, CITY AND PORT SANITARY DISTRICT OF CARDIFF;
MEDICAL OFFICER, CARDIFF EDUCATION AUTHORITY.

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CARDIFF:
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CITY OF CARDIFF.

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CITY OF CARDIFF.

Medical Officer of Health's Department.

Medical Officer of Health :
EDWARD WALFORD, M.D., D.P.H.

Assistant Medical Officers of Health :
E. FAIRFIELD THOMAS, M.D., D.P.H.
ELIZABETH F. ELDER, M.B., D.P.H.

Chief Inspector of Nuisances :
SAMUEL EVANS*

Supervising Inspector :
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District Inspectors :
T. W. WARREN.* J. STRANGE.* W. JAMES.*
J. W. HOLDEN.* F. DAVEY. E. J. H. UPHAM.*†‖

Inspectors of Lodging Houses :
W. FISHER.* A. F. MALE.*

Inspectors of Workshops and under Shop Hours Acts :
J. ASHMAN.* J. T. W. ROWLES*‖

Chief Inspector of Meat :
P. J. MULLANE, M.R.C.V.S.

Assistant Inspectors of Meat :
T. R. EVANS.*‖ H. TATTERSALL.*‖

Assistant Inspector of Meat and Inspector of Other Foods and of Cowsheds :
G. M. McGREGOR.*‖

Infectious Disease Inspector :
GEO. THOMAS.*

Disinfectors :
W. THOMAS. W. WEBSTER.

Health Visitors :
MISS F. WADE*. MRS. L. HUNTLEY.‡ MISS G. WADE.

Chief Clerk :
THOS. CHANT.*

Clerks :
W. H. ALDERMAN. ROBT. CHANT.*
P. F. NOOTE. A. J. GLOVER.
O. W. FUDGE.

* Cert. Royal San. Inst. † Cert. San. Insp. Exam. Board.
‡ Cert. Health Visitor and School Nurse Royal San. Inst. ‖ Cert. Meat Insp. Royal San. Inst.

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CITY OF CARDIFF.

CITY HALL,
CARDIFF,
JUNE, 1911.

TO THE LORD MAYOR, ALDERMEN, AND MEMBERS
OF THE CITY COUNCIL.

MY LORD MAYOR AND GENTLEMEN,

I have the honour to present to you my report on the health of Cardiff for the year 1910.

The report is made in accordance with the terms of Article XIX (14) of the General Order of the Local Government Board, dated 13th December, 1910, which specifies the information to be contained in the annual report of the Medical Officer of Health, as follows :—

"He shall as soon as practicable after the Thirty-first day of December in each year make an Annual Report to the Council, up to the end of December, on the sanitary circumstances, the sanitary administration, and the vital statistics of the District.

In addition to any other matters upon which he may consider it desirable to report, his Annual Report shall contain the information indicated in the following paragraphs; together with such further information as We may from time to time require :—

(*a*)—An account of any influences threatening the health of the District, the prevalence of infectious or epidemic diseases therein, and the measures taken for their prevention.

(*b*)—An account of all general and special inquiries made during the year.

(*c*)—An account of the work performed by the Inspector of Nuisances during the year, including the statement supplied in pursuance of Article XX. (16) of this Order.

(*d*)—A statement as to the conditions affecting the wholesomeness of the milk produced or sold in the District.

(*e*)—A statement as to the conditions affecting the wholesomeness of foods for human consumption, other than milk, produced or sold in the District.

(*f*)—A statement as to the sufficiency and quality of the water supply of the District and of its several parts, and in areas where the supply is from waterworks, information as to whether the supply is constant or intermittent.

(*g*)—A statement as to the pollution of rivers or streams in the District.

(*h*)—A statement as to the character and sufficiency of the arrangements for the drainage, sewerage and sewage disposal in all parts of the District.

(*i*)—A statement as to the privy, water-closet, and other closet accommodation in the District, including information as to the approximate number of each type of privy and closet.

(*j*)—A statement as to the character and efficiency of the arrangements for the removal of house-refuse, and the cleansing of earthclosets, privies, ashpits, and cesspools in the District.

(*k*)—A statement with regard to the housing accommodation of the District as required by Article V. of the Housing (Inspection of District) Regulations, 1910, and an account of any other action taken by the Council under the Housing, Town Planning, &c. Act, 1909, bearing on the public health.

(*l*)—A statement as to the vital statistics of the District, including a tabular statement, in such form as We may from time to time Direct, of the sickness and mortality within the District.

(*m*)—Where the Medical Officer of Health is appointed by the Council of a County Borough, or by a Council having delegated powers under the Midwives Act, 1902, a statement as to the administration of that Act in the District."

In the memorandum issued by Dr. Arthur Newsholme, Medical Officer of the Local Government Board, dated November, 1910, the chief subjects concerning which the Board desire information through the Annual Reports of Medical Officers of Health are set forth. These have not been materially altered since the issue of the memorandum of the preceding year, and it will therefore be unnecessary to repeat this information in detail, as it is contained in my Annual Report for 1909.

The following remarks occur relating to certain of these subjects:—

"Milk supply: character and wholesomeness of milk produced within the district or imported; condition of dairies, cowsheds, and milkshops; administration in regard to milk. Tuberculous milk."

"Other foods: unsound food and food inspection; sanitary condition of premises where foods are prepared, stored, or exposed for sale. Meat inspection, disease in meat, and condition of slaughter-houses. Action under Sale of Food and Drugs Acts, taken or needed. Action under section 117 of the Public Health Act, 1875. Number of carcases and parts of carcases condemned for tuberculosis. Information on this point should be given even when entirely negative."

"Schools, especially public elementary schools; sanitary condition of, including water supply; action taken in relation to the health of the scholars and for preventing the spread of infectious disease. Arrangements for medical inspection of school children."

"Methods of control of tuberculosis; whether any system of notification of cases of pulmonary tuberculosis, compulsory or voluntary, is in operation. Number of cases notified; what action is taken in respect of known cases and of deaths. Amount of hospital accommodation for cases of pulmonary tuberculosis in infirmaries and elsewhere, for advanced and for earlier cases of the disease."

"In reference to Schools the Memorandum on Medical Inspection of Children in Elementary Schools (Circular 576) issued by the Board of Education in November, 1907, dealing with the new duties thrown upon Local Education Authorities in this respect by Section 13 of the Education (Administrative Provisions) Act, 1907, and also Circulars 582 and 596 issued by the Board of Education in February and August, 1908, should be carefully studied. The above Act does not confer powers in supersession of those heretofore exercised generally in a public health sense by Sanitary Authorities under previous enactments; rather it is supplementary to existing Public Health Law in that it requires supervision of the health of the individual child. Where the medical officer of health is also school medical officer under the Code of Regulations for Public Elementary Schools, 1908, it may be convenient that the annual report which he is required to make in the latter capacity should be issued together with his annual report on the health of his district. In any case, whether the medical officer of health is or is not himself the school medical officer, he should state in his annual report what arrangements are in force for the discharge of the duties of the latter office, and for the medical inspection of children in public elementary schools in the district."

"Section 132 of the Factory and Workshop Act, 1901, which came into force on January 1st, 1902, requires that—

'The Medical Officer of Health of every District Council shall, in his annual report to them, report specifically on the administration of this Act, in workshops and workplaces, and he shall send a copy of his annual report, or so much of it as deals with this subject, to the Secretary of State.'

"The copy should be addressed to the Secretary of State, Home Office, Whitehall, and the foregoing remarks with respect to the transmission of the report to the Local Government Board apply also to its transmission to the Home Office.

"The medical officer of health is required to report on the administration of the Factory and Workshop Act, 1901, only in so far as this administration is in the hands of the District Council and is concerned with matters in his department. In reporting on the sanitary administration of workshops and workplaces he should include an account of the action with respect to factories, workshops, and workplaces taken under the Public Health Acts, as well as under the Factory and Workshop Act.

"In reporting on the sanitary condition of workshops and workplaces the medical officer of health should state what action has been taken to remedy any defective conditions met with under each heading. He should state whether section 22 of the Public Health Acts (Amendment) Act, 1890, is in force in the district, and what standard of 'sufficiency and suitability' of sanitary accommodation is adopted locally.

"The report should state as regards all existing underground bakehouses whether they comply with the requirements of the District Council in all respects; and the sanitary condition of all bakehouses should form the subject of exact comment."

PHYSICAL FEATURES OF DISTRICT.—The City of Cardiff comprises 6,373 acres of land and inland water, exclusive of foreshore and tidal water, and is situated upon impervious strata, consisting for the most part of new red marl; resting upon this formation are the more superficial deposits of river gravel, more or less saturated with water. A gradual rise in the gravel takes place towards the north, so as to attain a level of nearly 40 feet above Ordnance Datum in Queen Street and the Newport Road, and 50 feet at Cathays, where resting on the red marl, it forms a deposit to a depth varying from 8 to 20 feet of good building land, upon which the greater part of the north-east side of the town is constructed. The part of the town situated on the west of the River Taff is, in the northern or Canton District, on an alluvial deposit of clay, sand, and gravel; the southern, or Grangetown ward, being on the estuarine mud—a stiff blue clay of marine origin, which forms also the soil in the neighbourhood of the Docks and South Splott. This low-lying part of the town is now protected from the sea and tidal waters by banks, and has in many parts been raised by the deposit of made soil composed of ashes and house refuse collected by the public scavengers. The southern part of the town therefore consists of alluvial land at a very slight elevation above the ordinary sea level near the mouths of the Rivers Rhymney, Taff, and Ely.

The Rhymney and Ely Rivers, at the points at which they enter the Bristol Channel, form respectively the eastern and western limits of the City; the Taff flowing in a southerly direction forms a natural division of the town into east and west, each having a separate drainage system.

The area of the City of Cardiff is distributed in Registration Sub-districts as follows:—East Cardiff, 481 acres, Central Cardiff, 3,832 acres, and West Cardiff, 2,060 acres. The City is also divided into ten Municipal Wards containing the civil parishes of Canton, Roath, St. John, and St. Mary.

Cardiff is well provided with parks and open spaces, forming admirable recreation grounds and breathing spaces for the inhabitants of the crowded parts of the town. Those places, which belong to the public and are under the control of the Cardiff Corporation, comprise a total area of nearly 400 acres, as follows:—

	Acreage. Exclusive of Roads		
	Acres.	R.	P.
Roath Park	166	0	0*
Victoria Park	19	2	36
Canton Park	12	0	0
Loudoun Square	1	1	36
Howard Gardens	1	0	36
Adamsdown Square	0	1	32
Plasturton Gardens	0	2	39
Despenser ,,	0	3	23
Clare ,,	0	0	36½
Moorland ,,	1	2	5½
Grangetown ,,	3	0	31
Llanbleddian ,,	0	0	37
Ruthin ,,	0	0	28
Senghenydd ,, (North and South)	0	1	19
Windsor Esplanade Gardens	0	1	18
Penylan Brook Gardens	6	0	0
Waterloo Gardens	3	0	0
Splott Recreation Ground	18	0	0
Llandaff Fields	70	3	2
Cathays Park	60	0	0
Allen's Bank Crescent Open Space	0	1	16
Grangetown Recreation Ground	9	2	0
Total	366	2	35

* Including 66 acres outside City boundary.

In addition to the above-named open spaces the public has, through the generosity of the owners, access to the following parks and fields :—

	A.	R.	P.
Sophia Gardens	43	0	25
Sir David's Field	8	3	19
Cardiff Arms Park	17	3	32

HOUSE ACCOMMODATION.—The following Table gives the number of houses within each Municipal Ward in Cardiff, as shown by the enumeration made in June, 1910, by the Inspectors in the Department of the Medical Officer of Health. The table also shows the area, and the estimated population (based on the number of inhabited houses) of each Ward.

TABLE I.

Municipal Wards.	Area in Acres.*	Houses Inhabited.	Houses Uninhabited		Houses in course of Construction.	Lock-up Shops.	Total	Population.
			Not in occupation.	In occupation for Business Purposes.				
Central	473	1,857	73	338	...	301	2,569	11,279
South	519	1,637	60	180	...	24	1,901	10,363
Cathays	369	3,978	49	15	40	18	4,100	22,459
Adamsdown	1,570	1,996	42	34		2	2,074	13,700
Riverside	313	3,084	94	54		15	3,247	18,013
Canton	449	4,424	65	26	27	10	4,552	23,739
Grangetown	1,205	3,469	94	24	9	6	3,602	22,066
Roath	766	3,164	146	19	115	14	3,458	18,518
Park	533	4,571	65	60	3	29	4,728	23,856
Splott	1,454	3,001	30	29	3	5	3,071	18,399
Totals	8,351	31,184	718	779	197	424	33,302	182,392

* Including inland water and foreshore.

From the foregoing Table it will be seen that in June, 1910, there were 718 vacant houses, and that 197 were in course of construction. There is therefore no lack of house accommodation in Cardiff.

The following Table, taken from the Census returns, shows the number of inhabited houses and population in Registration Sub-districts in 1891 and 1901 :—

TABLE II.

Registration Sub-Districts.	Area in Statute Acres, Land and Inland Water.	Inhabited Houses.		Enumerated Population.		Increase or Decrease of Population between 1891 and 1901.	
		1891.	1901.	1891.	1901.	Increase.	Decrease.
East Cardiff	481	5,838	9,294	35,294	52,585	17,291	
Central Cardiff	3,832	8,102	8,835	53,824	54,316	492	
West Cardiff	2,060	6,536	9,843	39,797	57,432	17,635	

NOTE.—In the Census Return for 1911 the population of the Registration Sub-Districts is given as follows :—East Cardiff, 59,615 ; Central Cardiff, 57,506 ; West Cardiff, 65,159.

The following Table shows the density of the population, or the average number of persons per acre, within the City.

TABLE III.

Density of Population during the past ten Years.

Year.	Persons per acre.*
1901	25·9
1902	26·5
1903	27·0
1904	27·6
1905	28·1
1906	28·8
1907	29·4
1908	30·0
1909	30·6
1910	31·2

* Calculated on the basis of the revised population, and on area of 6,373 acres.

TABLE IV.

Number of houses and shops in Cardiff for which plans have been passed in each year since 1894 :

Year ended August 31st, 1895	1,507
,, ,, ,, 1896	1,196
,, ,, ,, 1897	1,247
,, ,, ,, 1898	1,258
,, ,, ,, 1899	624
,, ,, ,, 1900	267
,, ,, ,, 1901	230
,, ,, ,, 1902	185
,, ,, ,, 1903	398
,, ,, ,, 1904	228
,, ,, ,, 1905	389
,, ,, ,, 1906	291
,, ,, ,, 1907	222
,, ,, ,, 1908	307
,, ,, ,, 1909	377
,, ,, ,, 1910	307

TABLE V.

Table showing the action taken under Part II. of the Housing of the Working Classes Act, 1890, relating to houses unfit for human habitation since the Act came into force :—

Place.	Number of Houses.	Representations by Medical Officer of Health.	Closing Orders Obtained.	Houses Demolished.	Houses Repaired.
Bryant's Court	2	2	2	...	...
Castle Court	5	5	5	5	...
Evans' Court	2	2	2	...	...
Gulliver's Court	2	2	2	...	...
Harris Court	6	6	...	...	6
Hodge's Row	12	12	12	...	...
Jenkins Court	5	5	5	...	...
Jonathan's Court	2	2	2	2	...
Love Lane Court	5	5	1	...	4
Mason's Arms Court	8	8	8	...	...
Matthews' Court	6	6	6	...	...
Moulders' Arms Court	2	2	2	2	...
North Road	1	1	1	...	...
Picton Cottages	3	3	3	...	...
Spring Gardens Court	5	5	5	...	...
Stacey Court	4	4	4	4	...
Williams' Court	2	2	2	...	...
Totals	72	72	62	13	10

The Housing, Town Planning, etc., Act, 1909, contains many useful and important provisions for dealing with the sanitation of districts and houses. Section 17 (1) of the Act requires every Local Authority to cause to be made from time to time, inspection of their district, with a view to ascertain whether any dwelling-house therein is in a state so dangerous or injurious to health, as to be unfit for human habitation, and for that purpose to comply with such regulations, and to keep such records as may be prescribed by the Board.

By this Section the methods of procedure formerly adopted under Section 32 of the Housing of the Working Classes Act, 1890, are amended and varied. Whereas under the Act of 1890, it was the duty of the Local Authority to take proceedings in a Court of Summary Jurisdiction against the owner or occupier of a house unfit for habitation for the purpose of obtaining a Closing Order from the Court, it is now the duty of the Local Authority to make such Closing Order themselves, if they are satisfied, upon the representation of the Medical Officer of Health, that the house is unfit for habitation.

The Act of 1909 further provides that Regulations made under Section 17 (1) must be complied with and the prescribed records kept. Under Article I. of these Regulations, the Local Authority are required to determine the procedure to be adopted for the purpose of carrying into effect the provisions of Section 17 (1) of the Act of 1909, relating to the inspection of their district, and to cause to be prepared a list of dwelling-houses, the early inspection of which is in the opinion of the Medical Officer of Health desirable.

Article II. enumerates the matters in relation to which inspection should be made, as follows :—

(1)—The arrangements for preventing the contamination of the water supply.

(2)—Closet accommodation.

(3)—Drainage.

(4)—The condition of the dwelling-house in regard to light, the free circulation of air, dampness, and cleanliness.

(5)—The paving, drainage, and sanitary condition of any yard or out-houses belonging to or occupied with the dwelling-house.

(6)—The arrangements for the deposit of refuse and ashes.

(7)—The existence of any room which would in pursuance of sub-section (7) of Section 17 of the Act of 1909 be a dwelling-house so dangerous or injurious to health as to be unfit for human habitation.

(8)—Any defects in other matters which may tend to render the dwelling-house dangerous or injurious to the health of an inhabitant.

Article III. prescribes the records which must be prepared and kept under the direction of the Medical Officer of Health under the following headings :—

(1)—The situation of the dwelling-house, and its name or number.

(2)—The name of the Officer who made the inspection.

(3)—The date when the dwelling-house was inspected.

(4)—The date of the last previous inspection and a reference to the record thereof.

(5)—The state of the dwelling-house in regard to each of the matters referred to in Article II. of these Regulations.

(6)—Any action taken by the Medical Officer of Health, or other Officer of the Local Authority, either independently or on the directions of the local authority.

(7)—The result of any action so taken.

(8)—Any further action which should be taken in respect of the dwelling-house.

Article IV. requires the Local Authority to take these records into consideration at each of their ordinary meetings, and to give such directions, and to take such action as may be desirable in each case.

In a circular letter, dated September 3rd, 1910, relating to these Regulations, the Local Government Board state that they are aware that many Local Authorities have already instituted a system of inspection under which inquiries are made by the Inspector of Nuisances in respect of the matters referred to in Article II., the results being recorded in a form which contains information on other points besides those mentioned in the Article. The Board do not suggest that this form should be abandoned or altered, provided that it includes all the matters covered by Article II.

The form which is at present used by the Inspectors in connection with the systematic inspection of the district contains a considerable amount of information which is not required under Article II., but does not include one or two items mentioned in this Article. I have therefore drawn up an amended form for this purpose which will include all the information required by the Regulations, and have prepared a list of dwelling-houses of which early inspection is desirable, as required by Article I. of the Regulations.

Further, Section 14 provides that in any contract made after the passing of the Act for letting for habitation, a house, or part of a house, at a rent not exceeding £26, there shall be implied a condition, that the house is at the commencement of the holding, in all respects reasonably fit for human habitation, and Section 15 enacts that this implied condition as to fitness includes not only that the house at the beginning of the tenancy was fit for human habitation, but that it is maintained in this state during the tenancy.

During the year, since the aforesaid Regulations came into force in September, 1910, five houses have been dealt with under Section 17 of the Act. Representations were made in each case by the Medical Officer of Health that the houses were unfit for habitation, and Closing Orders were made by the Sanitary Authority.

WATER SUPPLY.—A full account of the Cardiff Waterworks has been given in previous annual reports. It will therefore be unnecessary to enter into any details on this occasion.

The water supplied to the City, and to areas beyond the City boundaries, as provided by Act of Parliament, is a pure, soft water, derived from the gathering grounds on the old red sandstone formation, to the north of the South Wales coalfield, about 35 miles from Cardiff, in the Taff Fawr Valley, Breconshire. The water is conveyed by gravitation from the storage reservoirs at Taff Fawr to the reservoirs at Llanishen and Lisvane, balancing reservoirs being placed at suitable situations along the line of the main conduit, with filter beds of sand, etc., at Rhubina and the Heath. At the latter place Candy's Polarite Filters are also in operation. The capacity of the storage reservoirs is as follows :—

Beacons Storage Reservoir	...	...	345,000,000	gallons
Cantreff	,,	,,	...	...	323,000,000	,,
Llanishen	,,	,,		...	317,000,000	,,
Lisvane	,,	,,	...	...	80,000,000	,,

The high level service is supplied from Rhubina, at which place the works comprise filter beds and storage reservoirs, supplemented by a service reservoir and water tower at Penylan, supplied with water by gravitation from Rhubina.

The average annual rainfall at the Brecon Beacons for the past 26 years was 76·89 inches, the total during 1910 being 91·75 inches.

I am indebted to Mr. C. H. Priestley, M.I.C.E., the City Waterworks Engineer, for the following information relating to the new works now in course of construction.

The Cardiff Corporation have obtained further powers to acquire land for an additional reservoir at Taff Fawr, to meet the requirements of the increasing population. The construction of this reservoir was commenced in November, 1910.

The drainage area in connection with the new reservoir (No. 3) is 6,400 acres in extent, in addition to 4,000 acres already in use, and the total storage of water in the reservoirs will amount to 2,265,000,000 gallons, including 1,200,000,000 gallons, the capacity of the new reservoir. It is estimated that an average daily supply of 30 gallons of water per head of the population will be available on the completion of these works.

The water is of excellent quality, as will be seen from the following report :—

CHEMICAL ANALYSIS OF SAMPLES OF CARDIFF WATER.

(All results are stated in parts per 100,000).

Date Collected.	Sample.	Reaction.	Hardness.	Chlorine.	Ammonia.		Nitrates.	Oxygen Absorbed, 4 hours, 80°F.
					Free.	Albuminoid.		
1910. November 1st	Heath Filtered ...	Faintly Alkaline	3·1°	·9	·0008	·0010	Practically Nil.	·125
,, 1st	Rhubina Filtered ...	Faintly Alkaline	3·1°	·9	·0008	·0058	Fain Traces	·171
,, 1st	Llanishen Reservoir	Very Faintly Alkaline	2·2°	·9	·0012	·0096	Faint Traces	·189
,, 1st	Lisvane Reservoir ...	Faintly Alkaline	2·9°	·9	·0010	·0066	Nil	·061
,, 2nd	Cantreff Reservoir ...	Very Faintly Alkaline	1·9°	·8	·0026	·0120	Faint Traces	·258
,, 2nd	Beacons Reservoir ...	Very Faintly Alkaline	2·0°	·8	·0020	·0116	Faint Traces	·254

FOOD INSPECTION.—The inspection of meat and other foods has been carried out satisfactorily during the year under the new arrangements set forth in the Annual Report for 1909. Mr. P. J. Mullane, M.R.C.V.S. acts as chief Meat Inspector, with three Food Inspectors under him, each holding the certificate for Meat Inspectors of the Royal Sanitary Institute.

As all the slaughtering in the City is carried on at the Municipal Slaughter-houses, there is no difficulty in securing an efficient inspection of slaughtered animals.

Most of the meat destroyed as unfit for food is surrendered voluntarily by the owner, usually a butcher, and the Inspectors have directions to pay regard to the recommendation of the Select Committee to the effect that "If a butcher who is in possession of tuberculous meat has notified the fact to the proper authority as soon as he could be reasonably expected to be aware of it, the case should not be taken into Court." Upon the new arrangement coming into force, a joint meeting of the local Butchers' Association and members of the Health Committee took place, when certain details of

administration were discussed and agreed upon, and as the result of this meeting the following instructions, approved by the members present, were issued to the Meat Inspectors :—

INSTRUCTIONS TO MEAT INSPECTORS.

(1) That in all cases in which the attention of butchers and slaughterers is called to the diseased condition of carcase or internal organs by the Meat Inspectors, the butcher or slaughterer be required either to surrender the carcase, etc., immediately, by signing surrender note, or to give notice in writing to the Chief Inspector (Mr. Mullane) that he desires the carcase, etc., to be detained for further examination.

(2) That such detention is not to extend beyond a period of 72 hours between the 1st May and 30th September, and 144 hours between the 1st October and 30th April.

(3) That the notice to the Chief Inspector must be given immediately the attention of the butcher or slaughterer is called to the condition of the carcase, etc.

(4) The notice may be given to one of the Meat Inspectors on duty at the time, or be left at the office of the Chief Inspector at the Roath Slaughter-house.

(5) That diseased pigs be dealt with in the same way that diseased carcases, etc., of other animals are now dealt with, i.e., in accordance with recommendations of Royal Commissior.

TABLE VI.

Approximate weight of meat and other food found to be unfit for food, and destroyed, either with the consent of the owner or by an order of a Magistrate, in each year since 1896 :—

Year.	Food.
1896	3,896 lbs.
1897	10,824 ,,
1898	9,929 ,,
1899	14,205 ,,
1900	21,217 ,,
1901	33,696 ,,
1902	43,675 ,,
1903	41,710 ,,
1904	41,606 ,,
1905	41,212 ,,
1906	48,909 ,,
1907	54,180 ,,
1908	146,102 ,,
1909	164,204 ,,
1910	171,592 ,,

TABLE VII.

Animals slaughtered at the Municipal Slaughter-houses during the year 1910 :—

	Roath Abattoir.	Canton Abattoir.	Totals.
Cattle	8,319	636	8,955
Sheep	44,030	4,799	48,829
Calves	4,621	250	4,871
Pigs	15,658	3,226	18,884
Totals	72,628	8,911	81,539

TABLE VIII.

Unsound carcases of meat seized or surrendered at Abattoirs :—

Place.	Carcases of				Destroyed by Magistrate's Order	Destroyed by Arrangement with Owner.
	Beef	Mutton.	Pork.	Veal.		
Roath Abattoir	25	36	37	18	...	116
Canton Abattoir	2	1	5	...	...	8
Totals	27	37	42	18	...	124

TABLE IX.

Causes of destruction of carcases :—

Cause.	Beef.	Mutton.	Veal.	Pork.	Totals.
Actinomycosis	1	...	...	...	1
Asphyxiation	...	...	...	1	1
Carcinoma	1	1	...	...	2
Decomposition	...	1	...	...	1
Dropsy	...	7	1	...	8
Emaciation	...	2	1	...	3
Emaciation and Dropsy	1	14	...	...	15
Found Dead	...	11	...	2	13
Jaundice	...	...	...	1	1
Peritonitis	...	...	...	1	1
Peritonitis and Pleurisy	...	...	...	2	2
Prematurity	...	...	14	...	14
Pyaemia	...	...	...	1	1
Rheumatoid Arthritis	...	1	...	1	2
Septic Metritis	1	...	...	...	1
Tuberculosis	23	...	1	33	57
Uraemia	...	...	1	...	1
Totals	27	37	18	42	124

Tuberculosis was found in 430 carcases altogether, and in 57 cases the whole carcases were destroyed.

TABLE X.

Approximate weight of meat seized or surrendered at Abattoirs :—

	Whole Carcases.	Part Carcases.	Offals.	Totals.
	lbs.	lbs.	lbs.	lbs.
Beef	17,420	7,275	18,691	43,456
Veal	705	...	372	1,077
Mutton and Lamb	1,237	40	2,763	4,040
Pork	5,539	861	2,838	9,238
Total	24,971	8,176	24,664	57,811

Approximate weight of meat and other food seized or surrendered at shops, stores, &c. :—

	Lbs.
Beef	10,680
Veal	118
Mutton	1,596
Pork	129
Poultry	1,475
Rabbits	222
Fish	56,237
Provisions	9,445
Vegetables	5,245
Fruit	28,394
Nuts	240
Total	113,781

In addition to the foregoing, 50 gallons of milk and 19 oysters were destroyed. In two cases Magistrates' Orders for destruction were obtained, viz. :—460lbs. of provisions, and 40lbs. of cherries.

TABLE XI.

Number of animals slaughtered, number condemned, and the percentage proportion condemned at the Municipal Slaughter-houses during each of the years, 1900–1910 :—

	Year.	Number of Animals Slaughtered	Number of Animals Condemned	Percentage Condemned
Roath	1900	83,880	30	
Canton	„	10,783	1	
Total		94,663	31	0·03
Roath	1901	69,385	61	
Canton	„	10,578	5	
Total		79,963	66	0·08
Roath	1902	73,528	66	
Canton	„	11,518	9	
Total		85,046	75	0·09
Roath	1903	69,146	72	
Canton	„	12,112	5	
Total		81,258	77	0·09
Roath	1904	74,550	80	
Canton	„	11,154	8	
Total		85,704	88	0·10
Roath	1905	70,076	74	
Canton	„	10,482	10	
Total		80,558	84	0·10
Roath	1906	67,155	94	
Canton	„	10,428	14	
Total		77,583	108	0·14
Roath	1907	68,845	81	
Canton	„	10,888	9	
Total		79,733	90	0·11
Roath	1908	71,212	103	
Canton	„	10,284	7	
Total		81,496	110	0·13
Roath	1909	77,572	102	
Canton	„	9,866	15	
Total		87,438	117	0·13
Roath	1910	72,628	116	
Canton	„	8,911	8	
Total		81,539	124	0·15

SALE OF FOOD AND DRUGS ACTS.—Samples submitted during the year 1910, to the Public Analyst, Mr. Thomas Hughes, F.I.C., Cardiff :—

TABLE XII.

Description.	Number.	Genuine.	Adulterated.
Arrowroot	3	3	...
Beer	6	6	...
Brandy	3	3	...
Bread	6	6	...
Butter	50	46	4
Butter (informal)	40	34	6
Butter (milk-blended)	1	1	...
Cheese	13	13	...
Coffee	6	6	...
Cornflour	3	3	...
Ground Ginger	3	3	...
Lard	5	5	...
Lard (informal)	12	12	...
Liquorice Powder	3	3	...
Margarine	15	15	...
Margarine (informal)	11	11	...
Milk	442	386	56
Milk (informal)	48	47	1
Milk (skimmed)	3	3	...
Mustard	3	3	...
Oatmeal	2	2	...
Pepper	3	3	...
Precipitated Sulphur	3	3	...
Rice	5	1	4
Sago	3	3	...
Self-raising Flour	2	2	...
Sulphate of Soda	3	3	...
Whiskey	3	1	2
Totals	700	627	73

TABLE XIII.

Legal proceedings under Sale of Food and Drugs Acts :—

No. of Sample.	Description.	Percentage of Adulteration.	Fines.	Remarks.
110	Milk	9·7% deficient fat	—	Dismissed.
115	,,	19% deficient fat	—	To pay costs.
119	,,	10% deficient fat	£2	And costs.
122	,,	8% deficient fat and 2·5% of added water	10/–	And costs.
133	,,	6·3% deficient fat	—	Proceedings withdrawn.
135	,,	33% deficient fat	—	Proceedings withdrawn.
142	,,	5% deficient fat	—	Proceedings withdrawn.
169	,,	6·3% deficient fat	—	Dismissed.
177	,,	6·3% deficient fat	—	Proceedings withdrawn.
191	,,	18% deficient fat	—	To pay costs.
210	,,	6% of added water	—	To pay costs.
240	,,	13% of added water	£2	And costs.
243	,,	6% deficient fat	10/–	And costs.
254	,,	23% deficient fat	£1	And costs.
260	,,	11% deficient fat	—	To pay costs
311	Butter	100% margarine	£5 1s.	And costs.
312	Margarine	Wrapper not labelled	5/–	And costs.
326	Butter	5·86% excess of water	2/–	And costs.
352	Milk	6% deficient fat	£2 1s.	And costs.
354	,,	11·7% deficient fat	—	Dismissed.
356	Butter	8·2% excess of water	—	To pay costs.
387	Margarine	Wrapper not labelled	—	Cautioned.
409	Milk	5·3% of added water	—	Dismissed.
418	,,	7% deficient fat	—	Dismissed.
418	,,	False warranty	—	Dismissed.
545	,,	5·7% deficient fat	10/–	And costs.
547	,,	0·018% boric acid	10/–	And costs.
566	Butter	89% margarine	12/6	
581	Milk	4·1% of added water	10/–	
696	,,	9·7% of added water	—	Dismissed
700	,,	6·9% of added water	—	Dismissed.

TABLE XIV.

Adulterated samples in cases where no legal proceedings were taken :—

No. of Sample.	Description.	Percentage of Adulteration.	Remarks.
36	Milk	2·3% deficient fat	—
73	,,	3% deficient fat	—
76	,,	3·3% deficient fat	—
91	,,	2% of added water	—
94	,,	1·6% of added water	—
106	,,	1·5% of added water	—
108	,,	1·7% of added water	—
117	,,	3% of added water	—
128	,,	2·7% of added water	—
129	,,	1·6% of added water	—
136	,,	1% deficient fat	—
176	,,	2% deficient fat	—
192	,,	1·6% of added water	—
196	,,	2% deficient fat	—
201	,,	3% deficient fat	—
211	,,	2% of added water	—
214	,,	2% of added water	—
215	,,	1·3% deficient fat	—
220	,,	3% of added water	—
244	,,	1% deficient fat	—
246	,,	1·5% of added water	—
258	,,	1·7% of added water	—
259	,,	1·3% of added water	—
261	,,	2·4% of added water	—
290	Butter	100% margarine	Informal sample
291	,,	100% margarine	Informal sample.
317	,,	8·2% excess of water	Informal sample.
319	,,	3·85% excess of water	Informal sample.
330	,,	100% margarine	Informal sample.
398	Milk	3% deficient fat	—
413	,,	1·5% of added water	—
415	,,	2% deficient fat	—
445	Rice	0·8% of mineral matter	Legal proceedings not recommended.
490	,,	0·76% of mineral matter	
491	,,	1·02% of mineral matter	
492	,,	0·78% of mineral matter	
535	Whiskey	0·7% under standard strength	Not sold as whiskey of standard strength.
537	,,	12·6% under standard strength	
587	Milk	2% of added water	—
589	,,	2% of added water	—
617	,,	1·9% of added water	—
619	,,	2% of added water	—
621	,,	2·1% of added water	—
631	,,	1% of added water	Informal sample.
680	Butter	1·3% excess of water	Informal sample.

Legal proceedings are not taken in cases of samples of milk in which the adulteration is small, and generally when the amount of added water is less than 5%.

TABLE XV.

Samples of milk analysed and proportion adulterated :—

	Samples Analysed.	ADULTERATED.					
		Number	Percentage	Added Water.	Deficient Fat.	Added Water and Deficient Fat.	Preservatives.
WHOLESALE—							
Taken at Railway Stations ...	148	18	11·5	9	9	—	—
RETAIL—							
Taken in shops, from carts, &c. ...	345	39		19	18	1	1

TABLE XVI.

Samples of all kinds of food and drugs and of milk taken for analysis in Cardiff and in thirty-three large towns during 1910 :—

Districts.	Estimated Population, 1910.	Total Number of Samples Analysed.	Samples per 1,000 of the Population.	Total Samples Adulterated.	Percentage Adulterated.	Samples of Milk Analysed.	Samples of Milk Adulterated.	Percentage of Milk Samples Adulterated.
Birkenhead	122,431	236	1·9	14	5·9	98	8	8·1
Birmingham	570,113	2,102	3·6	199	9·4	942	127	13·4
Blackburn	137,972	342	2·4	41	11·9	223	36	16·1
Bolton	190,315	416	2·1	43	10·3	359	42	11·7
Bradford	295,865	790	2·6	41	5·1	462	16	3·4
Brighton	131,900	535	4·0	36	6·7	327	15	4·5
Bristol	382,550	1,300	3·3	81	6·2	662	61	9·2
Burnley	107,448	348	3·2	24	6·8	206	13	6·3
CARDIFF	199,189	700	3·5	73	10·4	493	57	11·5
Croydon	164,485	457	2·7	48	10·5	251	28	11·1
Derby	131,256	109	0·8	11	10·0	85	11	12·9
Gateshead	133,676	161	1·2	11	6·8	77	11	14·3
Halifax	112,818	251	2·2	34	13·5	160	16	10·0
Hull	280,006	694	2·4	66	9·5	455	53	11·6
Leeds	490,985	632	1·2	168	26·5	568	156	27·4
Leicester	248,374	440	1·7	12	2·7	220	12	5·4
Liverpool	767,606	2,253	2·9	168	7·4	942	94	9·9
Manchester	716,354	3,017	4·2	72	2·3	1,100	54	4·9
Middlesbrough	107,014	304	2·8	42	13·8	114	40	35·1
Newcastle-on-Tyne	285,951	636	2·2	52	8·1	390	40	10·2
Norwich	125,446	212	1·6	29	13·6	105	21	20·0
Nottingham	266,471	570	2·1	64	11·2	298	25	8·3
Oldham	144,111	257	1·7	10	3·8	117	7	5·9
Plymouth	126,266	246	1·9	20	8·1	133	16	12·0
Portsmouth	217,989	1,005	4·6	75	7·4	540	44	8·1
Preston	119,253	253	2·1	14	5·5	53	7	13·2
Salford	244,636	975	3·9	23	2·4	397	21	5·2
Sheffield	478,763	885	1·8	94	10·6	475	53	11·1
Southamption	127,157	549	4·3	38	6·9	254	34	13·3
South Shields	119,737	150	1·2	9	6·0	69	6	8·7
Stockport	105,087	305	2·9	24	7·8	203	21	10·3
Sunderland	161,083	335	2·0	57	17·0	169	41	24·2
West Ham	328,585	1,258	3·8	128	10·1	801	95	11·8
Wolverhampton	105,962	229	2·1	24	10·4	87	4	4·6

INSPECTION OF FACTORIES AND WORKSHOPS.—The Factory and Workshop Act, 1901, made considerable alterations in, and additions to, the duties hitherto falling upon Medical Officers of Health. Under Section 132, the Medical Officer of Health is required in his Annual Report to deal specifically with the administration of the Act (so far as the matters under the charge of the Sanitary Authority are concerned), and to send a copy of this report to the Secretary of State.

The work carried out during the year 1910 is shown in Tables XVII. to XIX.

"Factories" include all places in which mechanical power is used in aid of the manufacturing processes, and certain other industries specified in Part I. of Schedule VI. to the Act, whether mechanical power is used or not. The duty devolving upon the Health Department in connection with factories is confined to the enforcement of Section 22 of the Public Health Acts Amendment Act, 1890, relating to the provision of suitable and sufficient sanitary conveniences. The inspections of factories referred to in the Tables were in connection with this duty.

"Workshops" include premises (not being factories) in which manual labour is exercised by way of trade or for purposes of gain in, or incidental to, the making, altering, repairing, finishing or adapting for sale any article, and to or over which the employer of the persons working there has the right of access or control.

"Workplaces," although not defined in the Act, include any place where work is done permanently and where people assemble together to do work permanently of some kind or another, such as stables, kitchens of restaurants, &c. The number of inspections of such places made during the year amounted to 517.

The Workshop Inspectors made 7,396 inspections of factories, workshops, &c., during the year, and 990 notices regarding nuisances and sanitary defects were served.

Sec. 101 of the Act imposes important duties on Sanitary Authorities in regard to underground bakehouses. This Section provides that no underground bakehouse shall be used as such unless it was so used at the time of the passing of the Act, *i.e.*, August 17th, 1901, and further, that after the 1st of January, 1904, no underground bakehouse (whenever established) may be used unless the Sanitary Authority is satisfied that it is suitable for the purpose in regard to construction, light, ventilation, and in all other respects, and has given a certificate of suitability. A definition of the term "underground bakehouse" is given for the first time in this Act :—"A bakehouse is to be deemed an underground bakehouse if any room used for baking or for any process incidental thereto is so situate that the surface of the floor is more than three feet below the surface of the footway of the adjoining street, or of the ground adjoining or nearest to the room."

In Cardiff there were only nine underground bakehouses at the time of the passing of the Act of 1901. Four of these have since been abolished as entirely unsuitable for the purpose, and one has been relinquished for other reasons, leaving four for which certificates were granted after completion of alterations required by the Sanitary Authority.

With regard to bakehouses generally, I have no definite statistical evidence that the conditions of the trade are injurious to the health of persons employed therein. In many of these places work is carried on during the night, and the openings intended for ventilation are frequently closed; gas is usually burned, and the air of the bakehouse becomes foul and over-heated. These conditions must naturally be prejudicial to the health of the workers, and there is good reason to believe that pulmonary disease is unduly prevalent amongst them. Little regard is paid by workers in bakehouses to the temperature of the rooms in which they are working, and thermometers are rarely seen.

In many bakehouses not connected with shops or dwelling-houses facilities for cleanliness by means of lavatories do not exist. Some of the older bakehouses are situated in unsuitable localities in the centre of the town, and in the neighbourhood of small and crowded houses and buildings which obstruct the light and ventilation.

There is need for further statutory powers in connection with the administration of the law relating to bakehouses in the following directions :—

(1)—The definition of "retail bakehouse" appears to be somewhat vague. Many of the bakers sell by retail from their bakehouses, and have no shop occupied therewith.

(2)—The provision of thermometers should be compulsory in bakehouses, and a standard temperature fixed. This provision might with advantage be included amongst the special requirements enforced by sanitary authorities.

(3)—Power should be given to enforce the provision of flues in connection with oven furnaces, when this is considered necessary by the Medical Officer of Health.

(4)—A minimum height should be fixed for bakehouses.

(5)—Storage of fuel and clothing in bakehouses should be prohibited.

(6)—The provision of lavatory accommodation should be compulsory in connection with all bakehouses.

(7)—Whenever a water carriage system of sewerage exists all water-closets should be provided with flushing tanks.

(8)—Covered metal boxes should be required for bakehouse refuse.

The following is a general summary of the chief points relating to the condition of bakehouses in Cardiff :—

FACTORY BAKEHOUSES.

There are twenty factory bakehouses, of which sixteen are "retail," three "wholesale," and one "wholesale and retail." The ventilation is in each case by natural means. Gas is used for lighting in fifteen cases, electric light and gas in four, and electric light only in one case. The floors are in most cases paved or made of other impervious material (concrete). In two cases the floors are made partly of wood and partly of concrete. The walls in eighteen cases are made of bricks (not plastered); in two cases the walls are plastered. Generally speaking the factory bakehouses are kept in a clean condition. Except in two cases flour is stored in lofts or rooms above the bakehouses; in one case the flour is stored in the bakehouse, and in another a room adjoining is used for the purpose. There is only one case in which no water-closet accommodation is provided, but the employees have permission to use the water-closet in premises adjoining. Lavatories are provided in two of the large factories. Bread and confectionery are baked in sixteen cases, bread only in one, biscuits only in one, and confectionery only in one case.

WORKSHOP BAKEHOUSES.

There are 168 workshop bakehouses in Cardiff. All of these are "retail" bakehouses. The ventilation is by natural means in each case. In most cases windows and fanlights which open are provided. Artificial lighting is obtained by means of gas in 156 cases and electric light in two; in ten cases oil lamps or candles are used. Except in one case where the floor is of wood covered with linoleum, the floors are of concrete, stone flags, or bricks. The walls in 94 cases are of bricks (not plastered), in 73 cases the walls are plastered, and in one case the walls are match-boarded. The bakehouses are generally kept in a clean condition. The flour is in 94 instances stored in lofts or rooms over the bakehouses; in 57 instances the bakehouse is used for this purpose. In the remaining 17 cases the flour is stored in rooms adjoining or near the bakehouse. In eight cases there is no W.C. accommodation. Baking is done as follows: bread only, 74; bread, confectionery, etc., 87; confectionery only, 6; meat pies only, 1.

UNDERGROUND BAKEHOUSES.

Four underground bakehouses exist, and in each case they are "retail." The ventilation, as in the case of other bakehouses, is by natural means. For artificial lighting, electric light is used in three cases, and gas in one. The floors are made of concrete in one instance, bricks in one, and paving in two. Walls of bricks (not plastered) in three cases, and plastered walls in one. Flour is stored in the bakehouse in two cases, and in other rooms on the same floor as the bakehouse in the other two. W.C. accommodation is provided in each of the underground bakehouses. Bread and confectionery are baked in two, and confectionery only in two cases.

HOME WORK.—Ninety lists of outworkers were received, giving the names and addresses of 353 work-people engaged in home work, and 592 inspections were made of outworkers' premises. Great importance is attached to the inspection of places in which these outworkers are engaged, the object being to prevent unwholesome conditions or nuisances injurious to the health of the workers. Sections 107–115 of the Act of 1901 give power to the Local Authority to prohibit work being done by outworkers, (1) in dwellings which are injurious or dangerous to the health of the workers themselves, *e.g.* through overcrowding, want of ventilation, or other insanitary conditions, (2) in premises where there is dangerous infectious disease. In ten instances infectious disease was found upon the premises of outworkers, and orders were made prohibiting the occupier of the factory or workshop from giving out work to the persons living upon the premises until they were free from infection. Nuisances found upon these premises were abated in the ordinary way under the provisions of the Public Health Acts and Sanitary Byelaws.

The following information is set forth on the form supplied by the Secretary of State, a copy of which has been forwarded to the Home Office.

TABLE XVII.

INSPECTION OF FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

I.—INSPECTION.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	1,271	170	—
Workshops (including Workshop Laundries)	5,016	667	—
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	517	89	—
Total	6,804	926	—

2.—DEFECTS FOUND.

Particulars.	Number of Defects		
	Found.	Remedied.	Prosecutions.
Nuisances under the Public Health Acts :—			
Want of cleanliness	210	193	—
Want of ventilation	37	30	—
Overcrowding	4	4	—
Want of drainage of floors	8	1	—
Other nuisances	682	594	—
*Sanitary accommodation (insufficient)	24	14	—
*Sanitary accommodation (unsuitable or defective)	225	205	—
*Sanitary accommodation (not separate for sexes)	9	4	—
Breach of special sanitary requirements for bakehouses (Sec. 97 to 100).	58	57	—
Total	1,257	1,102	—

* Section 22 of the Public Health Acts Amendment Act, 1890, adopted. Standard according to Order of Secretary of State under Section 9 of the Factory and Workshop Act, 1901.

3—HOME WORK.

Nature of Work.	Outworkers' Lists, Section 107.							Outwork in Unwholesome Premises, Sec. 108.		Outwork in Infected Premises, Sections 109, 110.	
	Lists received from Employers.				Number of Addresses of Outworkers received from other Councils.	Number of Addresses of Outworkers forwarded to other Councils.	Number of Inspections of Outworkers' Premises.	Instances.	Notices Served.	Instances.	Orders made (s. 110).
	Twice in the Year.		Once in the Year.								
	Lists.	Outworkers.	Lists.	Outworkers.							
Wearing Apparel :—											
(1) Making, &c.	86	339	4	14	3	2	592	64	64	10	10
(2) Cleaning and Washing	...	...	...	...	...	...	...	...	...	...	...

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the Year.	Number.
Bakers	169
Bootmakers	171
Dressmakers and Milliners	262
Laundries	44
Tailors	106
Miscellaneous	664
Total number of Workshops on Register	1,416

5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (Sec. 133) ...	64
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts but not under the Factory Act :—	
Notified by H.M. Inspector ...	29
Reports (of action taken) sent to H.M. Inspector ...	37*
Other (Sec. 127, Sub.-Sec. 3) ...	168
Underground Bakehouses in use at the end of the year ...	4

* Including reports of action taken regarding a number of notices received during 1909.

TABLE XVIII.

Factories, workshops, etc., on the registers, number of inspections made, and number of notices for the abatement of nuisances served, during the year 1910 :—

	Number on Registers.	Number of Inspections.	Number of Notices Served.
Workshops :—			
Bakers ...	169	1,174	123
Bootmakers ...	114	439	74
Dressmakers and Milliners ...	194	541	65
Laundries ...	41	338	44
Tailors ...	85	363	71
Miscellaneous ...	412	1,676	231
Domestic Workshops :—			
Bootmakers ...	57	180	21
Dressmakers and Milliners ...	68	135	17
Laundries ...	3	4	1
Tailors ...	21	43	6
Miscellaneous ...	50	123	14
Workplaces :—			
Miscellaneous ...	202	517	89
Outworkers' Premises :—			
Tailors ...	254	591	63
Others ...	1	1	1
Factories :—			
Bakers ...	17	85	5
Bootmakers ...	11	17	1
Laundries ...	14	87	12
Miscellaneous ...	316	1,082	152
Totals ...	2,029	7,396	990

TABLE XIX.

Nuisances in Factories, Workshops, &c., during 1910.

Nuisances.	Bakehouses.		Bootmakers' Premises		Dressmakers' and Milliners' Premises.		Laundries.		Tailors' Premises.		Outworkers' Premises.		Miscellaneous.		Totals.	
	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied
Want of cleanliness	56	55	42	40	21	17	18	19	32	30	12	12	97	87	278	260
Want of ventilation	—	—	1	—	2	2	7	2	15	16	10	8	12	10	47	38
Overcrowding	—	—	—	—	3	3	—	—	—	—	1	1	1	1	5	5
Want of drainage of floors	1	1	—	—	—	—	2	—	—	—	—	—	5	—	8	1
Sanitary Accommodation — Insufficient	2	1	—	—	—	—	—	—	2	1	1	1	20	12	25	15
Sanitary Accommodation — Unsuitable or defective	8	8	10	6	21	22	4	4	23	23	14	14	161	144	241	221
Sanitary Accommodation — Not separate for sexes	—	—	—	—	—	—	2	—	2	1	1	1	5	3	10	5
Defective or choked drains	10	10	4	4	6	6	4	3	4	3	4	4	44	37	76	67
Defective syphon traps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Defective gully traps	2	2	—	—	2	2	2	1	1	1	—	—	26	20	33	26
Want of flushing apparatus	6	6	5	3	2	2	1	—	3	3	3	2	25	20	45	36
Defective flushing apparatus	9	9	3	2	11	11	6	4	5	6	1	1	53	44	88	77
Defective yard surfaces	9	8	9	9	6	5	2	1	3	3	5	5	29	21	63	52
Offensive accumulations	14	13	3	3	2	2	5	4	5	5	1	1	38	35	68	63
Want of manure receptacles	2	1	—	—	—	—	—	—	—	—	—	—	4	1	6	2
Defective manure receptacles	3	3	1	1	—	—	1	1	—	—	—	—	4	3	9	8
Other nuisances	35	23	33	32	31	27	25	20	19	18	16	13	165	156	324	289
Totals	157	140	111	100	107	99	79	59	114	110	69	63	689	594	1,326	1,165

SHOP HOURS ACT, 1904.—This Act, which came into operation during the year 1904, enables Local Authorities to make Closing Orders fixing the hours of closing on the several days of the week, either in the entire area of the district of the Local Authority or in any specified part thereof. The Closing Order may apply to all shops of any specified class.

The Act requires that the occupiers of shops desirous of promoting early closing should apply to the Local Authority, who may then take further steps in accordance with the provisions of the Act.

TABLE XX.

Closing Orders under the Shop Hours Act, 1904, in operation in Cardiff, and number of inspections and infringements thereunder during 1910 :—

No. of Order.	Trade.	Area.	Inspections	Infringements.
1	Barbers	Whole City	385	11
2	Bootmakers	Grangetown	52	11
3	Bootsellers	Central Area	210	2
4	,,	Roath, Cathays, and Park	200	13
5	,,	Riverside and Canton	37	1
6	Goldsmiths, &c.	Central Area	165	8
7	Pawnbrokers	,, ,,	31	—
8	Goldsmiths, Pawnbrokers, &c.	Whole of City except Central	161	3
9	General and Fancy Drapers, Milliners, &c.	East of Taff Vale and Rhymney Railways	264	5
10	Toys or Fancy Goods	Central Area	203	24
		Totals	1,708	78

TABLE XXI.

Legal proceedings during the year 1910 under the Shop Hours Act, 1904 :—

Ref. No.	Offence.	No. of Closing Order.	Result.
1	Serving customers during prohibited hours.	3	Cautioned.
2	Aiding and abetting in previous case (No. 1) ...	3	Fined 10/–
3	Not exhibiting notices relating to Closing Order ...	6	To pay costs.
4	Serving customers during prohibited hours ...	9	Cautioned.
5	Do. do.	1	Cautioned.
6	Do. do.	10	Cautioned.
7	Do. do.	10	Cautioned.
8	Do. do.	3	Cautioned.
9	Do. do.	10	Cautioned.
10	Do. do.	10	Cautioned.
11	Do. do.	10	Cautioned.
12	Do. do.	10	Cautioned.
13	Do. do.	10	Fined 10/– and costs.
14	Do. do.	6	Withdrawn.
15	Do. do.	6	Withdrawn.
15a	Do. do.	6	To pay costs.
21	Do. do.	4	Withdrawn.
22	Aiding and abetting in previous case (No. 21) ...	4	Cautioned.
35	Serving customers during prohibited hours	6	Fined £1 and costs.
36	Aiding and abetting in previous case (No. 35) ...	6	Fined £1 and costs.
37	Serving customers during prohibited hours ...	6	Fined £2 and costs.
38	Do. do.	6	To pay costs.
41	Do. do.	3	To pay costs.
44	Do. do.	5	To pay costs.
45	Aiding and abetting in previous case (No. 44) ...	5	To pay costs
51	Serving customers during prohibited hours ...	10	Fined 10/– and costs.
52	Aiding and abetting in previous case (No. 51) ...	10	Fined 1/–.
61	Serving customers during prohibited hours ...	4	Cautioned.
74	Do. do.	1	Cautioned.
78	Do. do.	6	Dismissed.
81	Do. do.	1	Fined 10/– and costs.

TABLE XXII.

Inspections of Shops under the Shop Hours Acts, 1892, and the Seats for Shop Assistants Act, 1899 :—

Nature of Shops Inspected.	Number of Inspections.	Employing Young Persons.	Employing Females.	Shops in which Seats are provided.
Bootsellers	90	63	28	26
Butchers	191	121	4	4
Chemists	41	30	3	3
China Dealers	14	6	3	3
Confectioners	108	21	33	33
Dairies	19	10	2	2
Decorators	6	1	—	—
Drapers and Outfitters	220	122	88	74
Dyers and Cleaners	10	7	5	5
Fancy Dealers and Photographers	32	15	15	15
Furniture Dealers	27	5	1	1
General Dealers	10	2	—	—
Grocers	248	172	17	16
Hairdressers and Tobacconists	128	88	29	28
Ironmongers and Cycle Dealers	50	27	1	1
Newsagents and Stationers	73	41	22	20
Pawnbrokers and Jewellers	35	19	6	6
Publicans and Caterers	84	13	41	41
Fruiterers and Fishmongers	164	93	31	27
Seedsmen and Florists	21	9	5	2
Other Shops	72	34	10	8
Totals	1,643	899	344	315

REPORT OF THE INSPECTOR OF NUISANCES TO THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1910.

Inspection of Houses, &c. :—

Complaints of nuisances received	909
Houses, &c. inspected	10,024
Re-inspections of houses, &c.	21,271
Notices served (intimation)	4,614
,, ,, (statutory)	48
Notices complied with	4,539
Total number of nuisances abated	7,958
Drains unchoked and repaired	1,032
New W.C. pans provided	218
New syphon traps provided	35
New gully traps provided	44
W.C.'s repaired	134
W.C.'s cleansed	496
Flushing apparatus provided	3
,, ,, repaired	103
Roofs repaired	1,132
Shutes repaired	815

Inspection of Houses, &c.—continued.

Yard or area surfaces repaired	1,143
Yards or areas cleansed and limewashed	157
Offensive accumulations removed	404
Keeping of animals discontinued	4
Manure receptacles provided	14
,, ,, repaired	13
Plastering repaired	430
Boundary walls repaired	41
Floors or staircases repaired	480
Houses cleansed and limewashed	469
Ventilation improved	7
Water supply provided	56
Overcrowding abated	43
Other nuisances abated	685

Offensive Trades :—

Number on register	41
Inspections	596
Notices served	10
Notices complied with	9

Dairies, Cowsheds and Milkshops :—

Milkshops on register	375
Cowsheds on register	15
Inspections of milkshops	2,735
,, ,, cowsheds	172
Notices served	131
Notices complied with	117

Shops, Stores, &c. :—

Inspections of butchers' shops	2,420
,, provision shops	438
,, markets	735
,, wholesale stores	1,936
,, fish and fruit shops	607
,, storage premises	491

Testing of Drains :—

Drains tested with smoke	691
,, ,, with chemicals	706

Miscellaneous Inspections :—

Inspections of public houses	503
Notices served	71
Notices complied with	66
Inspections of theatres &c.	91
Notices served	5
Notices complied with	3
Inspections of fried-fish shops	554
Notices served	33
Notices complied with	28
Inspections of ice-cream shops	703
Notices served	9
Notices complied with	8
Inspections of urinals	359
Smoke observations	10

MORTUARY :—

Bodies removed to Mortuary (58 males and 13 females)	71
Post-mortem examinations at Mortuary	34

COMMON LODGING HOUSES :—

Common Lodging Houses on register	34
Day inspections	2,229
Night inspections	21
Notices served	159
Notices complied with	151

SEAMEN'S LODGING HOUSES :—

Seamen's Licensed Lodging Houses on Register	163
Licences expiring 14th January, 1911	83
,, ,, 8th June, 1911	80
Applications for Licences considered	239
Licences granted	210
Licences relinquished	47
Day inspections	6,212
Night inspections	99
Notices served under Byelaws	372
Notices under Byelaws complied with	371
Notices served under Public Health Acts	88
Notices under Public Health Acts complied with	88
Persons cautioned for lodging seamen without being licensed	70
Cases in which legal proceedings were taken for lodging seamen without being licensed	13

Persons fined	5
Amount of fines	£5 7s. 6d.
Persons cautioned	5
Cases dismissed	3

SUMMARY OF LEGAL PROCEEDINGS.

Legal Proceedings.	Number	Fines.
		£ s. d.
Under Sale of Food and Drugs Acts	31	15 11 6
,, Seamen's Lodging House Byelaws	13	5 7 6
,, Common Lodging House Byelaws	1	—
Public Health Act, 1875 (Sec. 96)	3	1 10 0
Shop Hours Act, 1904	31	6 1 0
Dairies, Cowsheds and Milkshops Orders	2	—
Totals	81	£28 10 0

HOUSE INSPECTION.

The following Table shows the number of houses inspected (house-to-house inspection) in each municipal ward, and gives particulars of nuisances found during such inspection :—

MUNICIPAL WARDS	Total Number of Houses Inspected	Over-crowded	Defective Drains	Choked Drains	Defective W.C.'s	Defective Traps	Number of W.C.'s	W.C.'s not supplied with water	Defective Paving in Areas or Yards	Dampness of Premises	Other Nuisances
Central	732	7	14	16	10	1	709	507	59	22	440
South	366	4	11	5	8	5	372	200	31	20	248
Cathays	924	2	25	16	17	2	927	823	122	25	532
Adamsdown	538	2	18	8	20	5	593	457	70	17	252
Riverside	397	1	3	7	8	1	420	318	38	7	138
Canton	333	2	4	1	20	1	334	172	77	21	226
Grangetown	336	6	11	7	11	9	337	269	57	10	320
Roath	993	2	27	12	20	1	1,005	880	173	101	500
Park	442	2	9	3	8	4	442	410	103	3	252
Splott	653	7	2	4	18	2	658	486	14	4	76
Totals ...	5,734	35	124	79	140	31	5,797	4,522	744	230	2,984

SAMUEL EVANS,
INSPECTOR OF NUISANCES.

VITAL STATISTICS.—The statistics in this report are based upon the Registrar General's estimate of the population of Cardiff for the middle of the year 1910. This estimate is given as 199,189, and is based upon the assumption that the rate of increase which had prevailed in the last completed inter-censal period has since been maintained.

The Registrar General points out in each annual report that this method, although it gives fairly accurate results when applied to the country as a whole, is likely to give quite unreliable figures when individual towns are taken into consideration. It is, however, probably the best available method, and is, in fact, the only one upon which comparative vital statistics can be based.

The error, which necessarily reached its maximum this year, will of course be corrected by the census enumeration in April, 1911. It is probable that on this occasion the Registrar General's estimate of the population will be in excess of the figure given by the census, although not to the same extent as in 1901.

The population enumerated at the census of 1901 amounted to 164,333 persons, being an increase of 27·5 per cent. since the census of 1891 ; this rate of increase being considerably less than that of the preceding inter-censal period, which slightly exceeded 55 per cent. As the Registrar General's estimate since 1901 has been based on this smaller rate of increase, the discrepancy between this estimate and the census of 1911 is not likely to be so great as on the occasion of the earlier census. It must be borne in mind, however, that the birth-rate in Cardiff, as in other parts of the country, has of late years been declining, and that the actual number of births has, with one or two slight exceptions, shown an annual decrease during the past ten years.

It is usual in most places to make some attempt at checking the Registrar General's estimate by a local census based upon the number of inhabited houses. This plan is adopted in Cardiff in June of each year ; the number of houses is multiplied by the average number of inmates per house found

at the last census. The estimate of the population of 1910 made in this way is given in Table I. on page. 10 of this Report, and it is likely that the results of the census enumeration of 1911 will not exceed this figure.

This method is again subject to error, owing to the uncertainty as to the number of inmates per house, and is likely to give a population also somewhat in excess of the actual number. Moreover, it is of little value from a statistical point of view, as birth-rates and death-rates based upon such an estimate could not be compared with those of other places calculated upon the Registrar General's estimate, a method which is universally adopted, and which therefore secures uniformity in the comparative vital statistics throughout the whole country.

The following table gives the populations according to the census returns since 1801. The increase shown between 1871 and 1881 was in part due to the extension of the boundaries of the Borough, by the inclusion of the districts of Roath and Canton, in the year 1875.

TABLE XXIII.

Year.	Census Population
1801	1,870
1811	2,577
1821	3,521
1831	6,187
1841	10,077
1851	18,351
1861	32,054
1871	39,536
1881	85,371
1891	128,915
1901	164,333

TABLE XXIV.

The following table gives the population, estimated by the Registrar General's method, in each year since the census of 1901.

Year.	Estimated Population.
1902	168,909
1903	172,598
1904	176,313
1905	180,054
1906	183,823
1907	187,620
1908	191,446
1909	195,303
1910	199,189

TABLE XXV.

The following table gives the population of Cardiff at various ages, estimated to the middle of 1910, in accordance with the method adopted by the Registrar General :—

Ages	Persons.	Males.	Females.
All ages	199,189	98,914	100,275
Under 5 years	25,099	12,372	12,727
5–10 years	22,951	11,484	11,467
10–15 ,,	20,621	10,282	10,339
15–20 ,,	19,667	9,511	10,156
20–25 ,,	19,715	9,264	10,451
25–30 ,,	18,228	8,981	9,247
30–35 ,,	15,891	8,033	7,858
35–40 ,,	14,166	7,242	6,924
40–45 ,,	11,570	6,104	5,466
45–50 ,,	8,928	4,686	4,242
50–55 ,,	7,213	3,698	3,515
55–60 ,,	5,256	2,663	2,593
60–65 ,,	4,007	1,961	2,046
65–70 ,,	2,697	1,224	1,473
70–75 ,,	1,735	797	938
75–80 ,,	916	398	518
80 years and upwards	529	214	315

The following is a Summary of Vital Statistics for the year 1910 :—

Estimated Population ... ... 199,189.

Births	4,822	Birth-rate per 1,000	24·2
Deaths	2,356	Death-rate per 1,000	11·8
Deaths from Zymotic Diseases	187	Zymotic Death-rate per 1,000	0·93
Deaths under one year of age	537	Deaths under one year per 1,000 births registered	111

Deaths and death-rates per 1,000 from Zymotic, Respiratory, and Tuberculous Diseases :—

Cause of Death.	Number of Deaths.	Death-rate per 1,000.
Small-Pox	1	0·00
Measles	44	0·22
Scarlet Fever	19	0·09
Diphtheria	24	0·12
Enteric Fever	7	0·03
Whooping Cough	21	0·10
Diarrhœa	71	0·35
Respiratory Diseases	397	1·99
Phthisis	216	1·08
Other Tuberculous Diseases	88	0·44

TABLE XXVI.

Table showing the birth-rate, death-rate, and zymotic death-rate per 1,000 persons living, and rate of infant mortality in Cardiff, compared with the rates in England and Wales during the year 1910, and with the rates in Cardiff during previous years :—

	Birth-rate.	Death-rate.	Zymotic Death-rate.	Deaths under 1 year per 1,000 births.
England and Wales	24·8	13·4	0·99	106
77 Great Towns	24·9	13·4	1·23	115
136 Smaller Towns	23·7	12·4	0·88	104
England and Wales, less the 213 towns	25·1	13·6	0·74	95
Cardiff—1910	24·2	11·8	0·93	111
Cardiff—10 years 1900–1909	28·7	14·7	1·62	131

NOTE.—The official returns of the census enumeration were not received in time to enable them to be used for statistical purposes in this report. According to these returns the population of the City of Cardiff on April 1st, 1911, was 182,280. The estimate of the Registrar General for the middle of 1910 gave a population of 199,189, upon which figures the birth-rates, death-rates, &c. have been calculated. In view of the reduction in the number as shewn by the census, it is necessary to revise these rates in accordance with a reduced estimate of the population for each year. This will, of course, have the effect of raising the birth-rates and death-rates in each case. The extent of this variation is shown in the following table, which gives the birth-rates and death-rates annually since 1901, calculated upon the Registrar General's estimate, as compared with rates based upon the revised estimates of the population. From this it will be seen that the death-rate in 1910 has been raised from 11.8 to 13.0 per 1,000 ; it is still therefore the lowest death-rate on record in Cardiff.

Year.	Calculated on Registrar General's Estimate.		Calculated on Revised Estimates.	
	Birth-rate.	Death-rate.	Birth-rate.	Death-rate
1901	31·4	15·7	31·5	16·1
1902	31·2	16·9	32·0	17·2
1903	30·4	14·4	31·2	14·8
1904	29·5	15·2	30·6	15·8
1905	28·5	13·5	29·8	14·2
1906	27·2	14·2	28·7	15·0
1907	25·9	15·0	27·7	16·0
1908	27·0	13·2	29·1	14·3
1909	25·7	13·0	28·0	14·2
1910	24·2	11·8	26·5	13·0

MARRIAGES.—The return of the number of marriages in the City of Cardiff during the years 1901–1910, with the rate of persons married per 1,000 of the population, is given below.

TABLE XXVII.

YEAR.	NUMBER OF MARRIAGES.	RATE OF PERSONS MARRIED PER 1,000 LIVING.
1901	1,641	19·8
1902	1,677	19·8
1903	1,668	19·3
1904	1,563	17·7
1905	1,650	18·8
1906	1,769	19·2
1907	1,743	18·5
1908	1,759	18·3
1909	1,803	18·4
1910	1,728	17·3

BIRTHS.—During the year 1910, the births registered in the city numbered 4,822; of these, 2,474 were males and 2,348 were females. The number of births corresponded to an annual birth-rate of 24·2 per 1,000 persons living.

During the ten years ended 1891, the birth-rate in Cardiff averaged 39·9 per 1,000, as compared with 28·7, the average rate during 1900–1909.

The following Table gives the annual number of births and the birth-rates in Cardiff in periods since 1852, from which it will be seen that a considerable decline in this rate has taken place during recent years.

TABLE XXVIII.

Period.	Number of Births.		Birth-rate per 1,000.	
1852-1861	1,144	Means.	44·2	Means.
1862–1871	1,364		37·7	
1872–1881	2,433		36·5	
1882–1891	4,166		39·9	
1892–1901	5,241		35·3	
1902	5,278		31·2	
1903	5,250		30·4	
1904	5,208		29·5	
1905	5,140		28·5	
1906	5,001		27·2	
1907	4,865		25·9	
1908	5,172		27·0	
1909	5,026		25·7	
1910	4,822		24·2	

TABLE XXIX.

The following table shows the number of legitimate and illegitimate births, male and female, in each municipal ward, and in the Union Workhouse during the year 1910 :—

Municipal Wards.	Legitimate.		Illegitimate.		Totals.		Totals.
	Males.	Females.	Males.	Females.	Males.	Females.	
Central	147	107	5	3	152	110	262
South	115	122	2	3	117	125	242
Cathays	302	276	6	6	308	282	590
Adamsdown	169	177	6	6	175	183	358
Riverside	171	161	10	12	181	173	354
Canton	323	315	6	9	329	324	653
Grangetown	395	351	6	6	401	357	758
Roath	206	213	3	4	209	217	426
Park	274	241	5	5	279	246	525
Splott	273	280	5	6	278	286	564
Union Workhouse	8	5	37	40	45	45	90
Totals	2,383	2,248	91	100	2,474	2,348	4,822

TABLE XXX.

Table showing the annual birth-rate per 1,000 in some of the large towns in England and Wales for the 10 years 1901 to 1910 inclusive :—

Large Towns.	Annual birth-rate per 1,000 persons living									
	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
London	29·0	28·5	28·5	28·0	27·1	26·6	25·6	25·2	24·2	23·6
West Ham	35·2	34·1	33·7	32·1	30·5	30·5	28·6	28·8	27·2	26·4
Croydon	26·4	26·1	26·3	26·1	26·4	25·7	25·7	25·4	24·4	23·2
Brighton	24·2	24·3	24·3	23·5	22·9	22·3	21·1	21·3	20·5	19·9
Portsmouth	27·9	27·1	27·9	28·2	27·7	28·6	27·9	28·4	27·2	26·7
Plymouth	26·8	27·0	25·5	25·3	25·6	23·9	23·2	22·2	22·4	20·3
Bristol	27·0	27·5	27·4	26·0	26·9	25·8	24·3	23·1	22·6	21·7
Swansea	30·1	31·1	32·0	30·5	30·9	31·9	32·5	33·1	33·0	32·6
Wolverhampton	31·7	31·6	30·5	29·8	28·7	27·4	26·4	25·8	23·8	22·6
Birmingham	32·1	31·8	31·8	31·5	29·2	29·2	28·3	28·4	26·6	26·3
Norwich	28·4	27·9	27·9	27·6	27·2	26·0	25·0	25·2	24·3	22·9
Leicester	29·0	29·1	27·4	26·6	25·8	25·3	23·2	23·4	21·9	21·4
Nottingham	28·4	27·8	28·3	27·8	26·5	26·5	26·8	26·6	25·7	24·8
Derby	27·8	28·0	27·0	27·2	25·5	25·0	25·1	25·9	24·9	24·1
Birkenhead	29·0	32·7	30·8	33·1	32·0	31·8	31·2	31·4	30·9	30·5
Liverpool	32·1	22·5	33·4	33·5	33·2	32·6	31·8	31·7	31·1	30·1
Bolton	27·5	27·2	27·0	26·9	25·1	25·5	24·4	24·5	24·7	22·9
Manchester	29·1	32·8	32·1	31·3	29·4	29·0	28·7	29·1	27·8	27·1
Salford	29·2	33·8	32·2	31·7	30·5	30·2	29·2	29·6	27·9	26·7
Oldham	24·6	26·1	25·6	24·9	24·3	26·9	26·5	28·0	27·4	25·8
Burnley	27·4	29·1	27·2	27·2	26·5	27·6	28·5	28·2	25·1	24·9
Blackburn	26·5	25·6	25·1	23·5	24·0	25·6	24·8	25·0	22·9	21·4
Preston	30·4	28·9	30·4	28·2	28·1	28·5	26·8	27·7	25·7	23·6
Huddersfield	22·7	24·4	23·8	23·7	23·8	24·2	23·2	24·4	24·5	22·9
Halifax	22·5	21·3	21·1	20·1	19·2	19·2	17·4	19·0	16·5	16·5
Bradford	23·1	23·0	23·3	22·0	21·0	20·6	20·0	20·2	18·8	18·6
Leeds	30·0	29·8	29·4	28·0	27·1	26·1	24·9	24·8	22·8	22·2
Sheffield	33·0	33·4	33·2	31·9	29·7	29·9	30·9	30·7	28·2	26·5
Hull	33·0	32·1	31·3	30·8	29·8	29·6	28·8	30·2	29·4	28·6
Sunderland	35·5	35·9	35·1	34·4	34·2	34·8	34·3	33·0	29·3	28·5
Gateshead	36·8	36·7	35·8	34·4	32·7	31·9	30·7	30·9	28·7	27·2
Newcastle-on-Tyne	32·1	32·6	31·1	30·5	32·1	30·6	29·7	29·7	27·3	26·4
CARDIFF	31·4	31·2	30·5	29·5	28·5	27·2	25·9	27·0	25·7	24·2

DEATHS.—The total number of deaths registered at all ages and from all causes in the City of Cardiff during the year 1910 amounted to 2,454. This number includes non-residents who died within the district. If this number is corrected by the subtraction of non-residents who died in public institutions in Cardiff, and by the addition of residents who died in institutions beyond the district, the number is reduced to 2,356, giving an annual death-rate of 11·8 per 1,000 persons living—the lowest rate on record. The average death-rate in Cardiff during the ten years 1900–1909 was 14·7 per 1,000.

Taking the five years 1905–1909, the death-rate in Cardiff was 13·7, as compared with 15·3 per 1,000, the average death-rate in the 76 large towns. During this period the death-rate in these large towns varied from 20·1 in Middlesborough, 19·5 in Liverpool and in Merthyr Tydfil, 19·0 in Oldham, 18·3 in Manchester, and 18·2 in Sunderland and Swansea, to 8·3 in Hornsey, 9·8 in Kings Norton, 10·8 in Leyton, 12·8 in Tottenham, and 13·7 in Cardiff.

TABLE XXXI.

Death-rate, zymotic death-rate, and rate of infant mortality in Cardiff, compared with the average rates in 77 great towns, for each quarter during the year 1910 :—

		Death-rate per 1,000.	Zymotic Death-rate per 1,000.	Deaths under 1 year per 1,000 Births.
1st Quarter, 1910—	Cardiff	13·1	0·8	128
	77 Great Towns	14·9	0·9	115
2nd Quarter, 1910—	Cardiff	11·6	0·9	85
	77 Great Towns	12·8	1·1	96
3rd Quarter, 1910—	Cardiff	9·6	1·1	107
	77 Great Towns	11·8	1·5	112
4th Quarter, 1910—	Cardiff	11·5	0·7	127
	77 Great Towns	14·8	1·3	137

TABLE XXXII.

The following Table gives the vital statistics in periods since 1852, and shows the marked decline in the general death-rate, in the death-rate from zymotic diseases, and in the birth-rate in successive periods :—

Years	Population	Births	Birth-rate per 1,000	Deaths	Death-rate per 1,000	Deaths from Zymotic Diseases	Zymotic Death-rate per 1,000
1852—1861 ...	25,889	1,144	44·2	756	29·2	222	8·58
1862—1871 ...	36,152	1,364	37·7	875	24·2	167	4·62
1872—1881 ...	66,639	2,433	36·5	1,335	20·0	218	3·27
1882—1891 ...	104,420	4,166	39·9	2,255	21·6	347	3·32
1892—1901 ...	148,606	5,241	35·3	2,674	18·0	355	2·39
1902	168,909	5,278	31·2	2,865	16·9	459	2·72
1903	172,598	5,250	30·4	2,496	14·4	232	1·34
1904	176,313	5,208	29·5	2,695	15·2	320	1·81
1905	180,054	5,140	28·5	2,443	13·5	216	1·14
1906	183,823	5,001	27·2	2,618	14·2	248	1·34
1907	187,620	4,865	25·9	2,819	15·0	358	1·91
1908	191,446	5,172	27·0	2,538	13·2	219	1·14
1909	195,303	5,026	25·7	2,549	13·0	170	0·87
1910	199,189	4,822	24·2	2,356	11·8	187	0·93

Means. Means. Means. Means. Means.

TABLE XXXIII.

Showing the number of deaths and death-rates at various age periods during the last six years :—

Ages.	Number of Deaths.						Death-rate per 1,000 persons living at each Age Group.					
	1905	1906	1907	1908	1909	1910	1905	1906	1907	1908	1909	1910
Under 5 years ...	860	904	1,026	838	720	741	37·9	39·0	43·4	34·7	29·2	29·5
5 to 15 ,, ...	102	110	98	111	92	102	2·6	2·7	2·3	2·6	2·1	2·3
15 ,, 25 ,, ...	125	135	147	127	135	128	3·5	3·7	3·9	3·3	3·4	3·2
25 ,, 65 ,, ...	906	1,006	1,008	962	1,014	883	11·7	12·8	12·5	11·7	12·1	10·3
65 years and upwards ...	450	463	540	500	588	502	84·5	85·3	97·5	88·5	102·1	85·4
At all ages ...	2,443	2,618	2,819	2,538	2,549	2,356	13·5	14·2	15·0	13·2	13·0	11·8

TABLE XXXIV.

Death-rates from all causes per 1,000 persons living in the several municipal wards, the highest rate in each year being underlined :—

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Cardiff (Whole District) ...	16·0	16·9	14·4	15·2	13·5	14·2	15·0	13·2	13·0	11·8
Roath Ward	11·9	14·0	12·4	13·3	11·4	12·3	11·9	10·7	11·3	11·9
Park Ward	12·3	10·0	8·7	9·3	8·8	8·9	9·9	8·9	8·9	9·3
Splott ,, ...	13·3	15·7	11·2	15·0	12·5	13·9	13·7	13·2	10·7	12·9
Central ,, ...	17·3	17·4	15·0	14·2	14·0	14·4	15·2	12·8	13·0	20·4
South ,, ...	16·7	15·6	15·3	15·2	13·0	16·4	17·1	15·4	14·3	18·3
Cathays ,, ...	11·8	13·5	9·8	11·1	10·1	11·2	11·1	10·0	9·3	10·5
Adamsdown Ward	16·1	20·1	16·1	15·5	17·6	17·2	20·3	15·7	17·2	14·9
Riverside ,, ...	11·0	11·9	14·3	11·3	9·4	9·2	10·1	10·7	10·8	13·6
Canton ,, ...	13·9	12·1	10·7	12·0	9·8	9·9	10·4	10·3	10·0	10·7
Grangetown ,, ...	14·6	15·7	13·6	15·2	14·3	14·4	17·0	14·0	14·0	14·0

TABLE XXXV.

Table showing the annual death-rates per 1,000 in some of the large towns in England and Wales for the 10 years 1901–1910 inclusive :—

Large Towns.	Annual death-rate per 1,000 persons living.									
	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
London	17·6	17·7	15·7	16·1	15·6	15·7	14·6	13·8	14·0	12·7
West Ham	18·0	17·1	15·3	16·7	15·5	15·3	14·6	13·9	14·0	11·7
Croydon	12·9	14·0	11·8	13·8	12·7	13·4	12·4	12·8	11·7	11·0
Brighton	16·5	15·8	14·3	16·6	10·9	14·4	14·7	14·7	15·3	14·3
Portsmouth	17·9	16·8	14·7	16·8	16·6	14·8	16·0	13·8	14·2	13·8
Plymouth	17·9	17·0	16·5	18·7	16·8	16·4	14·7	15·0	14·5	13·5
Bristol	16·0	17·4	14·3	15·4	14·7	14·3	13·2	13·6	12·7	11·5
Swansea	18·6	16·1	18·6	17·7	16·5	17·9	17·9	18·5	19·4	17·6
Wolverhampton	16·9	16·4	15·5	14·6	14·8	14·7	15·1	14·3	16·0	12·5
Birmingham	20·5	18·6	17·8	19·3	16·1	16·7	16·2	15·9	15·4	13·7
Norwich	18·7	16·7	15·2	18·2	16·5	16·7	14·6	14·1	13·9	12·5
Leicester	15·9	14·9	14·2	14·5	13·4	14·4	12·7	13·0	12·9	11·3
Nottingham	18·5	16·9	16·9	17·5	16·6	16·0	17·5	15·2	16·3	14·2
Derby	15·2	13·9	13·6	15·1	15·0	14·0	14·3	13·1	13·4	11·1
Birkenhead... ...	18·7	17·7	16·8	19·8	15·3	17·7	15·4	15·8	15·9	16·2
Liverpool	22·3	22·5	20·5	21·9	19·2	20·3	19·0	19·2	19·0	17·7
Bolton	18·2	16·9	17·5	16·9	15·4	15·5	16·8	15·4	15·1	13·4
Manchester	22·1	20·0	19·7	21·3	18·0	19·0	18·1	18·2	17·9	16·1
Salford	21·7	19·3	19·0	21·0	17·1	18·5	17·7	17·8	18·0	15·1
Oldham	19·6	19·1	18·6	18·3	18·8	18·8	19·4	19·8	19·1	17·3
Burnley	19·0	19·5	19·2	20·0	16·5	19·7	17·6	17·9	16·1	16·3
Blackburn	19·5	16·9	15·7	17·2	16·4	16·4	16·9	15·7	16·3	14·2
Preston	21·0	19·1	18·7	17·8	16·4	19·2	19·1	18·0	15·8	16·3
Huddersfield	16·7	17·8	16·7	17·5	16·9	17·3	16·9	17·1	16·3	16·6
Halifax	16·4	15·7	15·0	15·5	15·3	15·5	14·3	14·1	13·9	12·8
Bradford	16·8	15·8	16·4	17·5	15·1	16·1	14·8	15·5	14·5	14·0
Leeds	19·3	17·6	16·6	17·9	15·3	15·8	15·3	15·3	14.1	13·7
Sheffield	20·4	17·1	18·6	16·8	17·0	16·7	17·1	15·8	15·1	13·4
Hull	18·6	17·2	16·9	18·0	16·0	17·0	16·1	16·2	14·9	15·2
Sunderland	21·4	19·5	19·9	19·4	18·6	18·5	19·2	17·7	16·9	15·9
Gateshead	21·6	17·7	16·7	18·5	15·5	16·4	15·4	14·9	12·7	13·0
Newcastle-on-Tyne	21·9	19·9	19·2	19·4	16·8	17·1	15·9	16·0	14·8	13·9
CARDIFF	15·7	16·9	14·4	15·2	13·5	14·2	15·0	13·2	13·0	11·8

TABLE XXXVI.—Analysis of Births and Deaths in the City of Cardiff, in Registration Sub-Districts, and in Municipal Wards, during the year 1910.

LOCALITIES	*Population	Area in Acres (Land and Inland Water)	Persons per Acre	Births		Deaths		Deaths under 1 Year		Seven Principal Zymotic Diseases		Principal Zymotic Diseases.														Phthisis, Pulmonary Tuberculosis		Other Tuberculous Diseases.		Respiratory Diseases	
												Small-pox		Measles		Scarlet Fever		Whooping Cough		Diphtheria		Typhoid Fever		Diarrhœa							
				Number	Birth-rate	Number	Death-rate	Number	Number per 1000 births	Number	Death rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate
Cardiff (Whole District)	199,189	6,373	31	4,822	24·2	2,356	11·8	537	111	187	0·93	1	0·00	44	0·22	19	0·09	21	0·10	24	0·12	7	0·03	71	0·35	216	1·08	88	0·44	397	1·99
East Cardiff Registration District. — Roath Ward	18,518	..	..	426	23·0	222	11·9	58	127	17	0·91	..	..	3	0·16	3	0·16	1	0·05	3	0·16	..	..	7	0·37	22	1·18	6	0·32	32	1·72
East Cardiff Registration District. — Park Ward	23,856	..	..	525	22·0	222	9·3	38	72	18	0·75	..	..	6	0·25	4	0·16	..	..	5	0·20	1	0·04	2	0·08	22	0·92	8	0·33	32	1·34
East Cardiff Registration District. — Splott Ward	18,399	..	..	564	30·6	239	12·9	62	109	27	1·46	..	..	8	0·43	4	0·21	2	0·10	3	0·16	..	..	10	0·54	14	0·76	14	0·76	52	2·82
East Cardiff	60,773	481	124	1,515	24·9	683	11·2	158	104	62	1·02	..	..	17	0·27	11	0·18	3	0·04	11	0·18	1	0·01	19	0·31	58	0·95	28	0·46	116	1·98
Central Cardiff Registration District. — Central Ward	11,279	..	..	262	23·2	231	20·4	47	179	20	1·77	1	0·08	7	0·62	1	0·08	3	0·26	3	0·26	1	0·08	4	0·35	20	1·77	11	0·97	31	2·83
Central Cardiff Registration District. — South Ward	10,363	..	..	242	23·3	190	18·3	36	148	15	1·44	..	..	7	0·67	..	..	3	0·29	1	0·09	..	..	4	0·38	26	2·50	9	0·86	35	3·37
Central Cardiff Registration District. — Cathays Ward	22,459	..	..	590	26·2	236	10·5	62	105	17	0·75	..	..	2	0·08	1	0·04	1	0·04	4	0·17	..	..	9	0·40	23	1·02	8	0·35	32	1·42
Central Cardiff Registration District. — Adamsdown Ward	13,700	..	..	358	26·1	205	14·9	45	125	16	1·16	..	..	3	0·21	2	0·14	4	0·29	1	0·07	1	0·07	5	0·35	17	1·24	9	0·65	28	2·04
Central Cardiff	57,801	3,832	15	1,452	25·1	862	14·9	190	130	68	1·17	1	0·01	19	0·32	4	0·06	11	0·19	9	0·15	2	0·03	22	0·38	86	1·48	37	0·64	126	2·17
West Cardiff Registration District. — Riverside Ward	18,013	..	..	354	19·6	246	13·6	40	112	8	0·44	..	..	2	0·11	..	..	1	0·05	1	0·05	2	0·11	2	0·11	23	1·27	8	0·44	41	2·27
West Cardiff Registration District. — Canton Ward	23,739	..	..	653	27·5	255	10·7	62	94	23	0·96	..	..	6	0·25	2	0·08	3	0·12	2	0·08	1	0·04	9	0·37	25	1·05	6	0·25	46	1·93
West Cardiff Registration District. — Grangetown Ward	22,066	..	..	758	34·3	310	14·0	87	114	26	1·17	..	..	..	..	2	0·09	3	0·13	1	0·04	1	0·04	19	0·86	24	1·08	9	0·40	68	3·08
West Cardiff	63,818	2,060	30	1,765	27·6	811	12·7	189	107	57	0·89	..	..	8	0·12	4	0·06	7	0·10	4	0·06	4	0·06	30	0·47	72	1·12	23	0·36	155	2·42

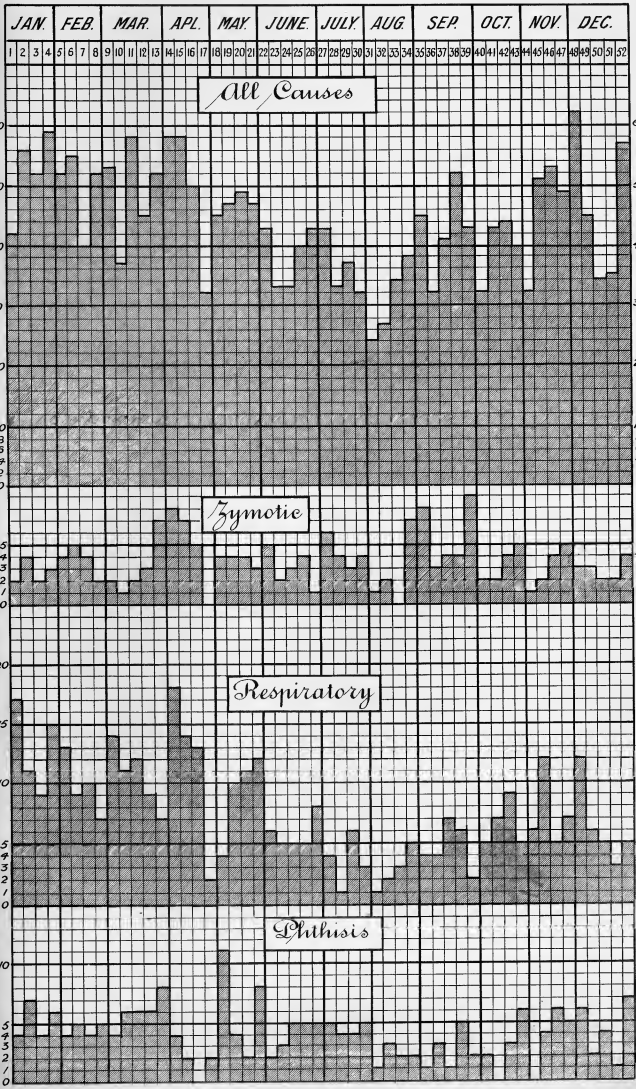
Ninety births occurred in the Union Workhouse; in this table these are included in the number for the Whole District, but excluded from the numbers for the Wards.

The deaths which occurred in public institutions are included among the deaths in their respective localities, according to the previous addresses of the deceased.

* The population of the whole district is that estimated by the Registrar General to the middle of the year 1910, and the population of the Wards (public institutions excluded) is estimated on the basis of the number nf inhabited houses in June, 1910.

Chart A

SHOWING THE NUMBER OF DEATHS FROM ALL CAUSES, ZYMOTIC DISEASES, RESPIRATORY DISEASES, AND PHTHISIS IN CARDIFF DURING EACH WEEK OF THE YEAR 1910.



INFANT MORTALITY.—The rate of infant mortality in Cardiff in the year 1910, calculated in the proportion of deaths under one year of age to 1,000 births registered, was at the rate of 111, compared with 103 in the year 1909, and with 131, the average rate for the ten years 1900–1909.

Rates of infant mortality throughout the country, as compared with that of Cardiff during 1910 :—

	Deaths under 1 year per 1,000 births.
England and Wales	106
77 Great Towns	115
136 Smaller Towns	104
England and Wales less 213 towns	95
CARDIFF	111

TABLE XXXVII.

Rate of infant mortality in Cardiff compared with the rates in the large towns and in England and Wales during past years :—

Period.	Deaths under 1 Year per 1,000 Births.		
	Cardiff.	Large Towns.	England and Wales.
1881—1890	165	162	141
1891—1900	161	172	153
1901	148	168	151
1902	145	145	133
1903	122	144	132
1904	144	160	146
1905	118	160	146
1906	134	145	133
1907	131	127	118
1908	124	128	121
1909	103	118	109
1910	111	115	106

From the foregoing table it will be seen that comparing the rates of infant mortality in the two periods 1881–90, and 1891–1900, an actual increase is shown in the later decennium, both in England and Wales as a whole and in the large towns. In Cardiff a slight decrease in the mortality is shown in the later period. Since the year 1900 there has been a steady, although not a very considerable decline in this mortality throughout the country. The rate of infant mortality in Cardiff in 1910 was, with the exception of that of 1909, the lowest recorded in this town since the first publication of vital statistics.

TABLE XXXVIII.

The following table shows the rate of infant mortality in the several municipal wards, the highest rate in each year being underlined :—

	Deaths under one year per 1,000 births.									
	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Cardiff (Whole District) ...	148	145	122	144	118	134	131	124	103	111
Roath Ward	128	146	133	123	104	114	121	115	105	127
Park ,, ...	129	129	93	120	70	98	95	97	77	72
Splott ,, ...	147	153	129	163	144	146	135	130	84	109
Central ,, ...	215	155	114	164	129	211	180	135	96	179
South ,, ...	181	166	190	173	135	159	176	140	154	148
Cathays ,, ...	125	120	104	110	95	99	107	99	78	105
Adamsdown Ward	171	153	146	142	149	153	134	114	160	125
Riverside ,, ...	234	112	109	135	112	110	109	128	89	112
Canton ,, ...	133	143	101	134	105	118	102	127	101	94
Grangetown ,, ...	133	161	122	170	134	151	159	133	110	114

TABLE XXXIX.

The chief causes of death amongst infants under one year of age in Cardiff during the years 1905–1910, are shown in the following table :—

Cause of Death.	Deaths under one year of age.					
	1905	1906	1907	1908	1909	1910
Premature Birth	74	87	95	113	89	96
Diarrhœa	52	117	53	105	52	55
Pneumonia	56	44	83	46	42	46
Bronchitis	43	59	54	30	33	46
Whooping Cough	18	41	30	25	30	11
Enteritis	24	30	27	36	25	22
Tuberculosis	38	42	22	29	22	24
Atrophy and Debility ...	75	83	86	80	61	63
Convulsions	64	47	47	52	55	44
Measles	19	...	35	2	7	16
Congenital Defects	20	18	11	18	26	22

TABLE XL.

The following table indicates the difference between the mortality of legitimate and illegitimate infants in Cardiff during the years 1905–1910 :—

Year.	Births.		Percentage of illegitimate to total births.	Deaths under 1 year.		Deaths under one year per 1,000 births registered.		
	Total	Illegitimate		Total	Illegitimate	Total	Legitimate	Illegitimate
1905	5,140	164	3·2	607	50	118	112	305
1906	5,001	172	3·4	675	59	134	127	343
1907	4,865	146	3·0	639	51	131	124	349
1908	5,172	193	3·7	644	63	124	116	326
1909	5,026	206	4·0	518	52	103	96	252
1910	4,822	191	3·9	537	57	111	103	298

TABLE XLI.

Infant mortality rates in 33 large towns:—

Towns.	Deaths under 1 year per 1,000 births registered.				
	1890—94	1895—99	1900—04	1905—09	1910
London	158	160	136	120	103
West Ham	159	180	152	137	101
Croydon	137	142	118	99	87
Brighton	151	165	117	105	109
Portsmouth	156	168	134	116	104
Plymouth	166	174	152	131	114
Bristol	145	147	126	115	90
Swansea	169	168	152	146	123
Wolverhampton ...	190	194	141	135	107
Birmingham	181	196	167	149	130
Norwich	179	185	169	141	103
Leicester	194	188	159	141	126
Nottingham	174	197	165	157	128
Derby	153	165	132	124	85
Birkenhead	172	175	153	129	135
Liverpool	191	191	169	151	140
Bolton	185	176	152	146	117
Manchester	184	197	166	151	131
Salford	200	210	165	148	130
Oldham	180	180	152	144	127
Burnley	199	223	202	180	168
Blackburn	203	203	162	146	136
Preston	231	239	178	160	158
Halifax	155	144	128	109	89
Bradford	169	171	150	136	127
Leeds	178	183	158	138	132
Sheffield	178	198	163	146	127
Gateshead	167	185	154	139	151
Newcastle-on-Tyne ...	167	182	149	133	121
Huddersfield	156	140	129	111	99
Hull	178	179	158	140	135
Sunderland	172	179	151	139	129
CARDIFF	165	156	134	123	111

Table V. in the Appendix gives the number of deaths from stated causes in weeks and months under one year of age during 1910. Summarising these tables for the year 1906–1910, it will be found that the infant mortality at age periods per 1,000 births was as follows:—

TABLE XLII.

Year.	Deaths per 1,000 births.				
	Under 1 week	Under 1 month.	Under 3 months	3—6 months	6—12 months.
1906	19·3	38·5	70·1	32·1	32·5
1907	23·6	39·0	65·3	22·6	43·4
1908	26·1	42·1	66·1	24·9	31·1
1909	22·2	37·0	56·5	18·9	27·6
1910	23·6	41·4	63·8	23·2	24·2

From the above table it will be seen that whilst the rate of infant mortality during the past five years has fallen considerably in the later months of life, it has risen during the earlier periods. It would seem that whilst State and Municipal hygiene has had a marked influence upon the lives and health of infants in the later months of their first years of life, it has had little effect upon the mortality during the first few weeks or months of life. The remedy for this state of things would appear to consist in the proper application of the principles of personal and domestic hygiene, and the more complete realisation by mothers of their maternal duties and responsibilities. The inference is that maternal ignorance is still responsible for much of the mortality which occurs during the first three months of life. The loss of life during quite the earliest period, due for the most part to immaturity, depends upon ante-natal conditions affecting the mother and child. Effectual remedial measures must be directed towards the improvement of the health of the expectant and of the suckling mother, and to the intelligent care of those infants who come into the world in this immature and feeble condition.

Of the 537 deaths from all causes amongst infants under one year of age, 200, or 37·2 per cent., were under one month; of these, 114, or 57 per cent., took place during the first week of life, and were for the most part attributed to premature birth, congenital defects, atrophy and debility, and to convulsions, conditions due in all probability to the state of health of the mother during pregnancy.

It has been pointed out in previous reports that the apparently large proportion of deaths attributed to premature birth may be due to some extent to the greater accuracy of certification and registration since the adoption and enforcement of the Midwives Act and the Notification of Births Act, legislation which has led to the higher education of midwives in the district, and therefore indirectly to the certification of the deaths of infants who lived but a short time, and which would formerly have been classed amongst the still-births. This source of error will not be entirely removed until all still-births occurring at viable ages are registered as such, or are made compulsorily notifiable.

Of the 537 deaths from all causes under one year of age, 55 were due to diarrhœa, including in this term epidemic diarrhœa, epidemic enteritis, infective enteritis, zymotic enteritis, summer diarrhœa, dysentery, dysenteric and choleraic diarrhœa. As usual, the fatal form of diarrhœa amongst infants was confined to the summer months. The fluctuation in the annual mortality from this disease depends largely upon the variations in the temperature and rainfall during the summer months, a hot and dry summer being usually associated with a high rate of mortality, and a cool and wet summer with a low rate. Dr. Ballard called attention to the relation between diarrhœal diseases

and the temperature of the ground, showing that the mortality from these diseases commences when the mean temperature of the 4ft. earth thermometer has attained somewhere about 56°F. Chart D. shows also that some sort of relation exists between the rise in the mortality from infantile diarrhœa and the relative positions of the 1ft. and 4ft. earth thermometers.

Obviously the complex meteorological conditions which prevail during the summer months are in some way associated with the development of the infective bacteria of epidemic diarrhœa. Perhaps one of the most powerful agents in reducing the amount of infantile diarrhœa is a copious rainfall, by which filthy accumulations are removed, and by which the superficial layers of the soil are cleansed and cooled. It will be seen that the summers in which the rainfall was much above the average were associated with a comparatively low rate of infant mortality.

Chart C. shows the number of deaths from diarrhœa at several age periods during the years 1906–10.

The past three years have on the whole been favourable to a low infant mortality. In each of the years 1908, 1909, and 1910, the absence of any prolonged spell of hot weather during the months of August and September resulted in a comparatively low death-rate from infantile diarrhœa during the third quarter of the year. There is reason to believe, however, that much of this reduction in the mortality amongst infants may be attributed to the special efforts which have been made by the Sanitary Authority during recent years. Full advantage has been taken of the opportunities for inquiring into the causation of disease and death amongst infants, offered by recent legislation, more particularly by the Midwives Act and by the Notification of Births Act, measures which have enabled Sanitary Authorities to assist mothers in the rearing and management of their infants and to instruct them in the simple laws of health.

Death-rates from various causes per 1,000 births during the year 1910, amongst infants under one year of age :—

CAUSE OF DEATH.	DEATH-RATE PER 1,000 BIRTHS.
Measles	3·3
Diarrhœa	11·4
Premature Birth	19·9
Bronchitis and Pneumonia	19·0
Atrophy and Debility	13·0
Convulsions	9·1

NOTIFICATION OF BIRTHS ACT, 1907.—This Act was adopted in this city in the year 1908, and came into force on the 13th April of that year. It provides for the notification to the Medical Officer of Health of every birth within the city, by the father, if residing in the house where the birth takes place, and by any person in attendance upon the mother at the time of, or within six hours after, the birth. Notice under this provision must be given to the Medical Officer of Health within thirty-six hours after birth.

The following table gives the number of births notified under this Act in each quarter of the year, 1910, together with the number of still-births.

Chart B.

DEATHS UNDER ONE YEAR PER 1000 BIRTHS IN CARDIFF.
1885 – 1910.

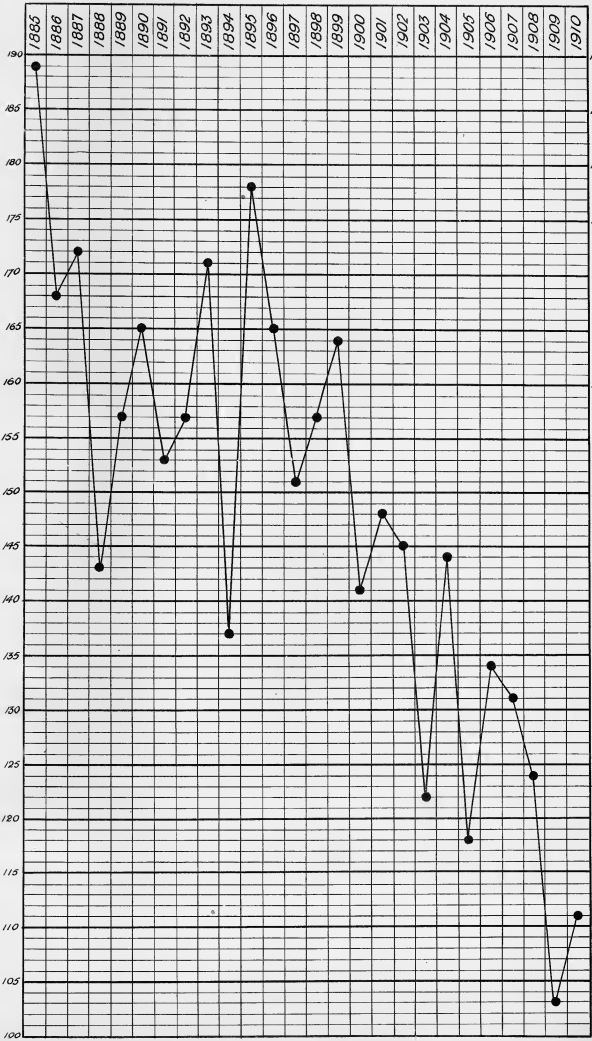


TABLE XLIII.

1910.	Births notified by Midwives.	Births notified by Doctors or Parents.	Duplicate Notifications Received.	Actual Number of Births notified.	Still-births notified.
1st Quarter ..	984	101	30	1,055	46
2nd ,,	1,076	147	49	1,174	75
3rd ,,	1,169	130	71	1,228	63
4th ,,	1,050	90	46	1,094	20
Totals ..	4,279	468	196	4,551	204

Births notified during the year 1910 4,551

Births registered during the year 1910 4,822

Number of still-born infants buried in the Cardiff Cemetery during the year 1910 225

From this table it will be seen that 94 per cent. of the births registered were notified.

The Health Visitors, Mrs. Huntley and Miss F. Wade, who act under the immediate direction of Dr. Elizabeth F. Elder, in the Department of the Medical Officer of Health, visit each house in selected districts in which a birth has been notified. The districts selected are, of course, those in which the poorer classes reside, and each house is visited in which a birth has taken place. The first visit is made soon after the birth, generally about the tenth day after the attendance of the doctor or midwife has ceased. Altogether, 3,862 primary visits were made by the Health Visitors, and 3,041 revisits. On the first visit a printed form of instructions is given to the mother, and subsequently, if necessary, a verbal explanation of the instructions is made, and any necessary assistance is rendered.

In the annual report for 1909 it was explained that several centres had been established in the town, to which mothers were invited to bring their infants, where they were medically inspected, weighed, and kept under observation, advice and instruction in the rearing and feeding being given on these occasions. It has been found, however, more convenient to concentrate this work at one central station. A weekly "Consultation for Infants" has therefore been established at the City Hall, in rooms set apart and fitted for the purpose.

Dr. Elder and the Health Visitors attend at the "Consultation" every Tuesday afternoon, when the mothers bring their infants and receive advice and instruction in the rearing of their offspring. The weight of each infant is placed upon a chart which is given to the mother, who can then readily observe the progress and development which is noted each week. Records are kept of the inspections, weighings and general progress of the infants, and, when necessary, of the family history and social conditions of the parents.

The following printed instructions are given to the mothers attending the "Consultations," and to those visited at their homes :—

NOTES ON THE FEEDING OF INFANTS.

Breast Feeding.

The breast feeding of the new born infant by the mother is the natural method of feeding, and diminishes to the utmost the chances of the infant dying.

Infants should be fed at the breast for a period of six months at least, but if that cannot be done, for as long a period as may be. Weaning ought to be done about the ninth or tenth month, but if possible, not during July, August and September. *Infants should be fed regularly*, and not every time they cry. If asleep, they should be awakened to be fed at the proper time.

Time Table for Infant Feeding.

Age.	Intervals by Day.	No. of Night Feeds.
	Hours.	
1– 6 weeks	2	2
6–12 weeks	2½	1
3– 6 months	3	1
6– 9 months	3	...
9–12 months	3½	...

If the mother has not enough milk, the child should get what she has, and in addition cow's milk. The cow's milk should be diluted according to the age of the child.

The cleansing of the breasts before and after suckling and the swabbing out of the child's mouth with warm water after it has been fed, are necessary precautions for the prevention of thrush and intestinal disorders.

Artificial Feeding.

If the mother cannot feed the child, the infant must be fed with the milk of an animal (cow, ass, or goat), with water or barley water added.

To make barley water, put a tablespoonful of *Pearl* Barley into a pint of cold water, boil for half an hour and strain through muslin. Make fresh daily. If *Patent* Barley is used, two teaspoonfuls are boiled in a pint of water.

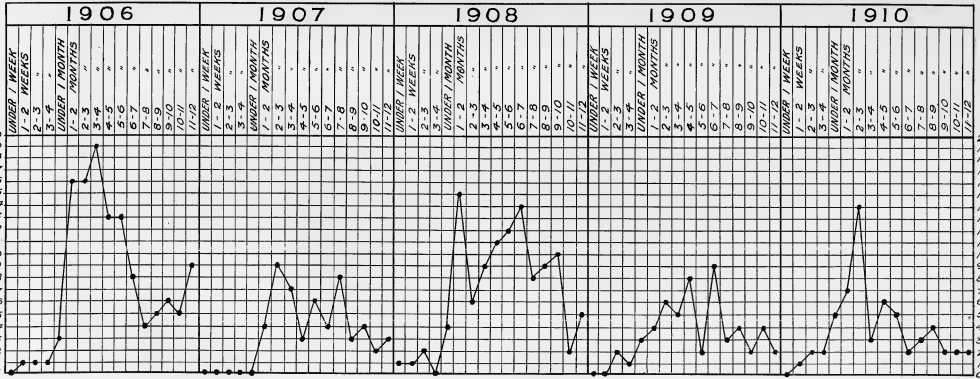
Up to the age of seven or eight months, milk is the only natural food suitable for Children.

Directions for Feeding Infants with Cow's Milk.

Age of Child.		For each meal.
Under 4 weeks	1 Part Fresh Milk ... 2 Parts Boiled Water ... 1 Teaspoonful Cream ...	4 Tablespoonfuls.
4 weeks to 3 months ...	1 Part Fresh Milk ... 1 Part Boiled Water ... 2 Teaspoonfuls Cream	4 gradually increasing to 8 Tablespoonfuls.
3 months to 6 months ...	2 Parts Fresh Milk ... 1 Part Boiled Water ... 3 Teaspoonfuls Cream	8 Tablespoonfuls increasing to 12 Tablespoonfuls.

Chart C.

DEATHS FROM DIARRHOEA AT AGE PERIODS UNDER ONE YEAR IN CARDIFF, 1906–1910.



The mixture should be scalded. A small teaspoonful of brown sugar should be added to each pint of the mixture.

From the age of six to twelve months, the child should be fed with undiluted cow's milk, each meal consisting of 10 to 12 tablespoonfuls.

After eight months of age, a teaspoonful of baked flour may be mixed with the milk at three of the meals.

At the age of twelve to eighteen months, the amount of milk may be doubled. Bread and milk, bread and butter, a lightly boiled egg, a little milk pudding, and some crumbs soaked in red gravy, may be given occasionally.

Bottles should be boat shaped, and fitted with short rubber teats. Long feeding tubes should be avoided.

Bottles should be kept scrupulously clean, two being used alternately, each bottle being boiled and rinsed immediately after use. The *teats* should be reversed and boiled after use.

Dummies or comforters should not be used. They are a cause of diarrhœa, and at a later age, of adenoids.

An infant should be washed thoroughly all over every day, and dried carefully with a soft towel, afterwards the back and buttocks should be powdered with Talc Powder and Boracic Powder.

Infantile Diarrhœa.

This seldom occurs among infants fed from their mothers' breasts. It is usually caused, especially in hot weather, by the souring and decomposition of the food, the neglect of scrupulous cleanliness of the utensils in which the food is kept, from keeping the food too long before using it, by keeping it near a drain or sink, or by keeping it in a dirty, ill-ventilated room.

In the summer boil the milk, and add boiled water.

Do not wean the infant during the months of July, August and September. To begin artificial feeding during the hot weather is dangerous.

Scrupulous cleanliness in the house, especially in the rooms where food is stored, is most important. Dust is injurious; therefore washing is a safer means of cleansing floors than sweeping.

EDWARD WALFORD, M.D.,

Medical Officer of Health.

Advice Meetings for Mothers.

Dr. Elder and the Health Visitors of the Cardiff Corporation will be glad to meet mothers and infants for advice, weighing, etc., at the City Hall (entrance on North Side) at 2-45 to 4 p.m.—

From Canton and Riverside	1st Tuesday of month	
,, Roath, Park and Splott	2nd.	,, ,,
,, Grangetown and South	3rd	,, ,,
,, Central, Cathays and Adamsdown	4th	,, ,,

(Tuesdays following Bank Holidays excepted).

City Hall,
Cardiff.

Judging by the number who attend, and by the interest taken by the mothers in these "Consultations," they are exceedingly popular institutions, and there is every reason to believe that this method of instructing mothers will in time have a very considerable influence in the reduction of the rate of infant mortality in this district, although at present it may be difficult to estimate this influence in accurate statistical terms.

The City Hall "Consultation" was opened on the 4th July, 1910, and Dr. Elder reports to me that up to the end of the year, 550 babies have attended; 206 of these, however, only attended once; of the remaining regular attendants, 300 were infants under 12 months of age, and 44 were between one and two years of age. Altogether, 1,436 weighings took place at this centre. In most cases the mothers have carefully attended to the instructions given to them, and generally the condition and progress of the infants have been most satisfactory.

The mortality amongst these infants has been exceedingly small. Of the 344 regular attendants, only three died, the ages at death being 1 month, 6 months, and 18 months respectively. There is every reason, therefore, to believe that the administrative measures now being undertaken will have the effect of lowering the rate of infant mortality, and of saving a vast number of young lives.

The advantages of a "Consultation" for infants in connection with the general administrative work in the Medical Officer of Health's Departments are obvious. The practical utility of both the Notification of Births Act and the Midwives Act is immensely increased. Without this Institution we should have to rely solely on an incomplete system of home visitation, supplemented by leaflets of instruction, methods which in themselves are unlikely to yield such good results as the definite medical instruction given directly to the mothers at the weekly consultations, where interest in the welfare of their offspring is aroused and maintained by the attendance of their neighbours, and by watching the progress of their own and of numerous other infants in various stages of development.

A wholesome spirit of emulation is also fostered by the periodical "baby shows," or competition for prizes, which forms an useful adjunct to the "Consultation."

A "Consultation" of this kind forms also a useful centre from which defects in the housing and home conditions of the poor can be more easily reached and remedied. From the condition of those who visit the "Consultation," the state of the home can sometimes be judged with some degree of accuracy, and on many occasions the Health Visitors receive information indicating the necessity of a visit to the home. By such means, houses and even streets have in time assumed a more agreeable and wholesome aspect.

MIDWIVES ACT, 1902.—This Act has now been in operation since the 1st April, 1903, and is administered locally by the Health and Port Sanitary Committee, with the Medical Officer of Health as Executive Officer.

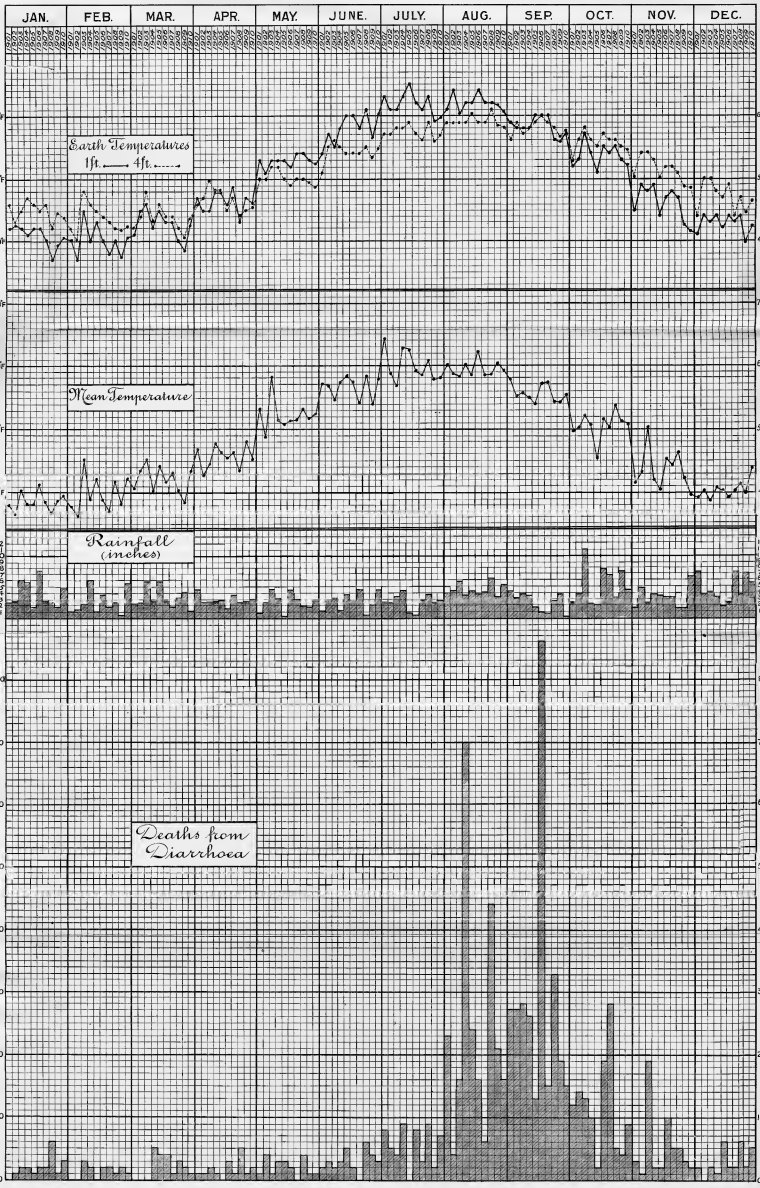
The Act provides for the education of midwives, and for the certification and enrolment of women qualified to act in that capacity. No person can now habitually act as a midwife, otherwise than under the direction of a qualified medical practitioner, unless she be certified under this Act. The Certificate of the Central Midwives Board can only be obtained after the training specified in the Rules of the Board, and after passing the Board's Examination. A certain number of midwives were, however, placed on the Roll of Midwives and certified in virtue of their having been in practice before the passing of the Act.

A course of training has been established at the University College of South Wales and Monmouthshire, in Cardiff, for those who intend to present themselves for the Board's examination. The instruction is given by Dr. E. J. Maclean, who informs me that during the year ended 31st December, 1910, 90 pupil midwives attended the course, 32 of whom resided in Cardiff.

The Cardiff City Council and the Glamorgan County Council contribute towards the expenses of this course, and have the privilege of nominating women for free studentships in midwifery. Twelve such studentships are awarded annually to women residing in Cardiff.

Chart D

SHOWING THE RELATION BETWEEN EARTH TEMPERATURES, TEMPERATURE OF THE AIR, RAINFALL, AND DIARRHOEA MORTALITY.



The Committee of the Queen's Nursing Institute have established a Maternity Department, and take pupils for the practical training of midwives. Pupils residing in Cardiff may also obtain their practical training from medical men practising in the district, and from certified midwives recognised by the Central Midwives Board. Practical training can also be obtained by the resident nurses at the Cardiff Union Infirmary.

The supervision of the practice of midwives has been efficiently carried out by Mrs. L. Huntley, the Inspector appointed by the Local Supervising Authority, who holds the licence of the Obstetrical Society and is a certified midwife.

The following tables give information relating to the administration of the Midwives Act during the year 1910.

Number of Midwives on Roll for 1910 121

CERTIFIED MIDWIVES AND THEIR QUALIFICATIONS.

Bona Fide	75
London Obstetrical Society	11
Examination of Central Midwives Board	35
Total	121

Certified Midwives.	Case Book.	Record Book.	Washable Dress.	Bag.	Appliances, Complete	Appliances, Part.
104	104	104	104	104	104	...
12	12	12	12	12	...	12
1	1	1	1	...	...	1
2	2	...	2	...	...	2
2	...	...	2	...	...	2
121	119	117	121	116	104	17

Midwives working as Monthly Nurses ... ... 17.

Stillbirths Notified by Midwives	204
Deaths of Midwives	2
Suspended from Practice	4
Struck off Roll, April 20th, 1910	1
Cases of Puerperal Fever attended by Midwives	4
Censured by Central Midwives' Board, April 20th, 1910	1

RECORDS OF SENDING FOR MEDICAL HELP.

IN CASE OF MOTHER :—	
Abortion	2
Delay in Labour	46
Presentation wrong or not felt	22
Ante-Partum Haemorrhage	5
Post-Partum Haemorrhage	6
Retained Placenta	14
Ruptured Perineum	13
Pyrexia	7
Small Pelvis	7
Growth on Cervix	3
Placenta Prævia	7
Illness of Mother	11
Accidental Haemorrhage	1
Total	144
IN CASE OF CHILD :—	
Feebleness of Child	17
Death of Child	3
Deformity	1
Stillbirths	8
Large Child	4
Discharging Eyes	4
Total	37

INFECTIOUS DISEASES.—The 2,356 deaths from all causes included 187 from the principal infectious diseases. This number was equal to an inclusive death-rate from these diseases of 0·93 per 1,000 persons living, as compared with 0·87 per 1,000, the rate in 1909, and with 1·62, the average rate in the ten years 1900–1909. The death-rate from the principal infectious diseases in England and Wales in 1910 was 0·99 per 1,000.

The mortality from infectious diseases in Cardiff was distributed in each quarter of the year as follows :—

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Small-pox	—	1	—	—
Measles	15	23	6	—
Scarlet Fever	5	4	3	7
Diphtheria	5	5	2	12
Enteric Fever	2	2	—	2
Whooping Cough	8	8	3	2
Diarrhœa	6	7	41	16

In the Registration Sub-districts the mortality during 1910 from these diseases was as follows :—

	Death rate per 1,000.
East Cardiff	1·02
Central ,,	1·17
West ,,	0·89

TABLE XLIV.

Death-rates in Cardiff from Infectious Diseases per 1,000 persons living :—

	1875—80	1881—90	1891-1900	1901-1910	1910
Small-pox	0·01	0·03	0·01	0·00	0·00
Measles	0·46	0·66	0·42	0·32	0·22
Scarlet Fever	1·00	0·41	0·17	0·09	0·09
Diphtheria	0·11	0·20	0·47	0·19	0·12
Whooping Cough	0·55	0·52	0·48	0·30	0·10
Enteric Fever	0·37	0·33	0·14	0·04	0·03
Diarrhœa	0·78	0·93	0·91	0·48	0·35

TABLE XLV.

The following Table shows the number of cases of infectious disease notified in the City of Cardiff since the adoption of the Infectious Disease (Notification) Act, 1889 :—

Year.	Small-Pox.	Diphtheria (including Membranous Croup)	Scarlet Fever.	Enteric Fever.	Typhus Fever.	Erysipelas.	Puerperal Fever.	Continued Fever.	Totals.
1890	—	72	335	150	—	45	4	2	608
1891	9	70	658	130	—	52	10	—	956
1892	5	164	1,851	118	—	95	12	3	2,248
1893	4	479	816	103	41	152	24	2	1,621
1894	10	343	577	62	1	135	19	3	1,150
1895	1	248	484	79	—	132	17	5	966
1896	45	306	874	74	1	134	21	7	1,462
1897	7	516	758	117	—	163	12	7	1,580
1898	—	960	332	80	—	133	18	6	1,529
1899	—	640	184	94	—	176	13	8	1,115
1900	4	714	383	95	4	106	15	5	1,326
1901	8	734	1,362	73	—	152	16	3	2,348
1902	2	701	1,433	69	—	169	13	7	2,394
1903	65	438	963	100	6	145	20	5	1,742
1904	11	406	658	40	—	112	12	2	1,241
1905	24	327	362	39	—	133	14	3	902
1906	2	333	776	77	—	117	17	1	1,323
1907	16	304	950	62	—	147	16	—	1,495
1908	—	291	475	55	—	167	15	1	1,004
1909	2	283	616	46	—	132	6	2	1,087
1910	1	363	887	36	—	137	8	—	1,432

SMALL-POX.—One fatal case of small-pox occurred during the year, which was the only case of this disease notified.

The mortality from small-pox in Cardiff since 1875 was as follows :—

YEARS.	DEATH-RATE PER 1,000.
1875–80	0·01
1881–90	0·03
1891–1900	0·01
1901	0 00
1902	0 00
1903	0·01
1904	0·00
1905	0·00
1906	0·00
1907	0·01
1908	0·00
1909	0·00
1910	0·00

I am indebted to Mr. Matthews, the Vaccination Officer, for the following return of vaccinations within the City during the year 1910 :—

Successfully Vaccinated	Insusceptible	Postponed	Certificates of Exemption	Died Unvaccinat'd	Unaccounted for or left the town
2,784	11	69	683	380	597

The following table shows the condition as to vaccination amongst the notified cases of small-pox during the years 1906–1910.

TABLE XLVI.

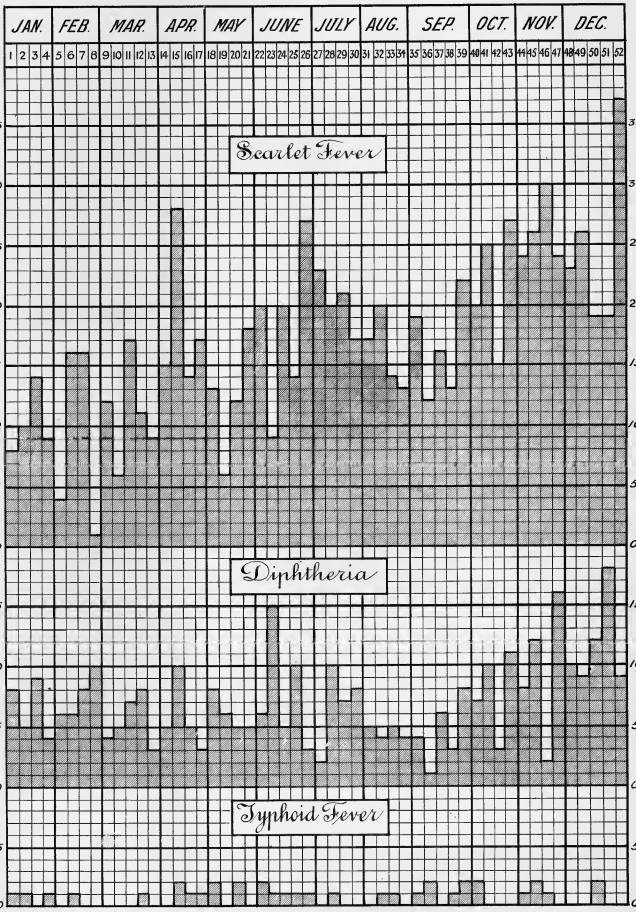
Year	No. of Cases	No. of Deaths	Vaccinated in Infancy	Vaccinated later in life	Re-vaccinated	Un-vaccinated
1906	10	2*	3	2	1	5
1907	15	1†	13	...	2	2
1908	...	...	...	...	...	...
1909	3	1*	1	1	...	1
1910	1	1†	1	...	...	...
Totals ...	29	5	18	3	3	8

* Unvaccinated. † Vaccinated in infancy.

MEASLES.—Forty-four deaths from measles occurred during the year, being equivalent to an annual death-rate of 0·22 per 1,000 persons living. This disease prevailed extensively during the first and second quarters of the year, most parts of the town being in turn invaded, until towards the end of the year the outbreak had practically ceased. Of the forty-four deaths from measles, forty-two occurred amongst children under five years of age.

Chart E

SHOWING THE NUMBER OF NOTIFICATIONS OF SCARLET FEVER, DIPHTHERIA AND TYPHOID FEVER DURING EACH WEEK OF THE YEAR 1910.



So far as the incidence of the disease upon Elementary Schools was concerned, it was confined almost entirely to the Infant Departments.

Printed forms are supplied to all the Head Teachers of schools to enable them to notify to the Medical Officer of Health cases of illness (including measles) amongst the scholars attending the schools. These returns proved of great assistance in dealing with the outbreak.

Having regard to the fact that measles is practically confined to the Infant Departments, it is the custom to exclude only from these departments children residing in houses in which there are cases of the disease. Children from such houses attending the boys' and girls' departments are allowed to go to school provided they have previously had measles. This method, which gives all the control possible over the spread of the disease amongst school children, interferes as little as may be with the education of the community.

The following is a copy of the notice left at the house in which measles is known to exist :—

MEASLES.

In every case of Measles or suspected Measles, a medical man should be sent for.

Measles is exceedingly fatal amongst young children ; all such cases therefore require early medical treatment and careful nursing.

Children suffering from the disease should be kept in a well-ventilated and warm room—temperature 65°F.

The patient should be separated from all other children for at least three weeks after the appearance of the rash.

The early symptoms of Measles are sneezing, coughing, and watery secretions from eyes and nose.

When the early symptoms appear, the patient should be separated from other children, when, if the disease proves to be Measles, the rash will have appeared.

When the patient has recovered, disinfect the sick room by washing the floor, walls, and furniture (as far as possible) with soap and hot water. Infected articles of clothing and bedding should be boiled for an hour ; and under medical advice, any such articles may be sent to the City Disinfecting Station on application being made to the Medical Officer of Health.

Children who have already had Measles may be allowed to attend the Boys' and Girls' Departments of Schools, but no children living in houses in which there are cases of Measles may attend the Infant Departments.

EDWARD WALFORD, M.D.,

Medical Officer of Health.

CITY HALL, CARDIFF.

NOTE.—Persons are liable to a fine of £5 for exposing in the street, or in any public place or conveyance, infected persons or things.

SCARLET FEVER.—Nineteen deaths were attributed to scarlet fever during the year 1910, being equal to an annual death-rate of 0·09 per 1,000 persons living, as compared with 0·03, the rate in 1909, and with 0·05, the average rate in the five years 1905–1909.

The mortality from scarlet fever throughout the country was as follows during the year 1910—

	Death rate per 1,000.
England and Wales	0·06
77 Great Towns	0·08
136 Smaller Towns	0·06
CARDIFF	0·09

The number of cases of scarlet fever notified during the year amounted to 887, distributed as follows in the Registration Sub-districts :—

Registration Sub-Districts.	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total.
East Cardiff	59	69	102	168	398
Central ,,	33	77	61	65	236
West ,,	42	67	64	80	253
Totals	134	213	227	313	887

Age periods of persons notified to be suffering from scarlet fever :—

Ages.	No. of cases Notified.
0—1 year	8
1—5 years	259
5—15 ,,	540
15—25 ,,	52
25—65 ,,	28

Of the 887 cases of scarlet fever notified, 697, or 78·5 per cent. were removed to the Isolation Hospital.

TABLE XLVII.

Scarlet Fever.

Year	Population.	No. of Cases Notified.	Attack rate per 1,000	No. of Deaths.	Death rate per 1,000	Percentage Removed to Hospital.	Mortality per cent. of Cases Notified.
1890	117,012	335	2·86	19	0·16	—	5·6
1891	130,283	685	5·25	35	0·27	—	5·0
1892	132,895	1,851	13·17	87	0·65	13	4·7
1893	136,168	816	6·00	39	0·28	22	4·7
1894	139,519	577	4·13	8	0·05	31	1·3
1895	142,958	484	3·38	8	0·05	43	1·6
1896	146,479	874	5·96	28	0·19	48	3·2
1897	150,087	758	5·05	17	0·11	50	2·2
1898	153,783	332	2·15	8	0·05	56	2·4
1899	157,414	184	1·16	3	0·01	66	1·6
1900	161,452	383	2·37	11	0·06	65	2·8
1901	165,308	1,362	8·23	29	0·17	47	2·1
1902	168,909	1,433	8·42	36	0·21	48	2·1
1903	172,598	963	5·57	32	0·18	63	3·7
1904	176,313	658	3·73	25	0·14	72	3·3
1905	180,054	362	2·00	4	0·02	75	1·1
1906	183,823	776	4·22	3	0·01	74	0·4
1907	187,620	950	5·06	21	0·11	72	2·2
1908	191,446	475	2·42	10	0·05	78	2·1
1909	195,303	616	3·10	7	0·03	79	1·1
1910	199,189	887	4·45	19	0·09	78	2·1

The connection between scarlet fever prevalence and school attendance is shown in Chart F, giving the number of notifications in each month during the years 1901–1910, from which it will be seen that a fall in the curve is usually found in the month of August, coinciding with the school holidays, which is occasionally followed by a rise, due apparently to the reassembling of the schools in September.

Towards the end of the year some cases of scarlet fever occurred which were apparently due to milk infection. My attention was directed to this source of infection by a sudden outbreak of scarlet fever in a public institution, and by the notification of several cases of the disease in other parts of the town, in all of which the milk supply was derived from the same dairy farm.

The outbreak was characterised by a sudden onset and by an equally sudden decline, and was limited in point of time to a period of about ten days.

At the institution in question, between the 20th and 31st December, 1910, seven cases of undoubted scarlet fever occurred, and twenty cases of sore throat with no other definite signs of this disease. In-patients, nurses, and servants were attacked, and a few porters and workmen residing outside the institution.

During the same period fourteen cases were discovered in ten separate dwellings in the City, all being supplied from the Dairy Farm A., situated just outside the city boundaries. On visiting this farm with the Medical Officer of Health of the District Council, I found that a case of scarlet fever had been notified to him in the person of the daughter of the milk-vendor, who lived with her parents in the farm-house. She was removed to the Isolation Hospital belonging to the District Council on the 26th December, and was taken ill on the 24th. The dairy-farmer himself and his wife (the father and mother of the patient removed) were at the time under medical treatment for sore throats, but showed no other signs of scarlet fever.

No history of any cases of definite scarlet fever could be traced amongst any persons employed at the farm, although one of the farm labourers, living within half-a-mile of the farm was absent on account of illness. As there was no medical man in attendance, I visited him on the 27th December, and found him ill in bed, having apparently suffered from an attack of acute tonsilitis, but with no symptoms of scarlet fever. He had been ill about a week, but had milked the cows up to the 24th December. Further inquiry brought to light the fact that two children of this man had previously been ill with sore throat, but with no history or signs of scarlet fever. The child of a near neighbour, a playmate, and attending the same school as the farm labourer's children, was notified on December 4th to be suffering from scarlet fever.

It is obvious that the farmer's daughter could not have infected the milk before the 24th December, and indeed it is not probable that she infected it at all, as she had no concern with the milk business. Some suspicion rests, however, upon the farm labourer and his family.

The first case of definite scarlet fever in the public institution was recognised and notified on the 20th December, followed by cases on the 21st 22nd, 23rd, 25th, 26th, and 30th. Amongst others consuming milk from Farm A., and living in various parts of the town, one case was notified on the 20th December, five on the 25th, three on the 26th, one on the 29th, and one on the 31st December. At another charitable institution taking the same milk, four cases of scarlet fever occurred between the 2nd and 4th January, 1911. At the same time several cases of sore throat without the scarlet fever rash were discovered amongst inmates of the infected houses.

A list of the customers of A. was obtained, and it was found that twelve houses were infected, or 18 per cent. of the houses supplied with milk from A. At this time the incidence of scarlet fever upon houses in the city, not supplied with milk from A. would appear to be approximately as follows :— Thirty-one houses were infected in a total of 31,184 inhabited houses, in round numbers 30,000. Assuming that the inmates of one third of these (10,000) consumed more or less milk, the proportion of infected houses would be 0·3 per cent., as compared with 18 per cent. amongst the houses supplied with milk from the Farm A. One house therefore in every 5·6 amongst A.'s customers was infected, as compared with one in every 322 throughout the town amongst the customers of all the other milk dealers.

The case mortality in this outbreak was high ; three deaths occurred amongst twenty-three cases, or 13 per cent., as compared with an average case mortality of 1·8 per cent. during the past three years.

The sudden decline of the outbreak was characteristic of milk-borne scarlet fever. As soon as the milk supply to the institution was suspected, the milk was boiled before being used until an entirely fresh supply could be obtained, and no further cases of scarlet fever occurred.

The farmer readily complied with the request of the Sanitary Authority to cease for a time the supply of milk from his cows, so that it was unnecessary to put into force the compulsory clauses of Section 4 of the Infectious Diseases Prevention Act, 1890, prohibiting the supply of milk to anyone in the city.

The house and farm premises (A.) cowsheds, dairy, &c., were thoroughly cleansed and disinfected immediately after the removal to hospital of the farmer's daughter, after which the supply of milk was carried on as usual, and no fresh cases of the disease occurred amongst A.'s customers.

DIPHTHERIA AND MEMBRANOUS CROUP.—Twenty-four deaths were registered from these diseases during the year, corresponding to an annual death-rate of 0·12 per 1,000 persons living, as compared with 0·10, the average death-rate in the five years 1905–1909.

The mortality from diphtheria throughout the country in 1910 was as follows :—

	Death-rate per 1,000.
England and Wales	0·12
77 Great Towns	0·12
136 Smaller Towns	0·11
CARDIFF	0·12

The number of cases of diphtheria notified in Cardiff during the year amounted to 363, compared with 283 during the year 1909. The fatality, or proportion of deaths to cases notified, during the year was 6·6 per cent. Of the 363 cases notified, 247, or 68 per cent. were removed to the Isolation Hospital.

Number of notifications of diphtheria during each quarter of the year :—

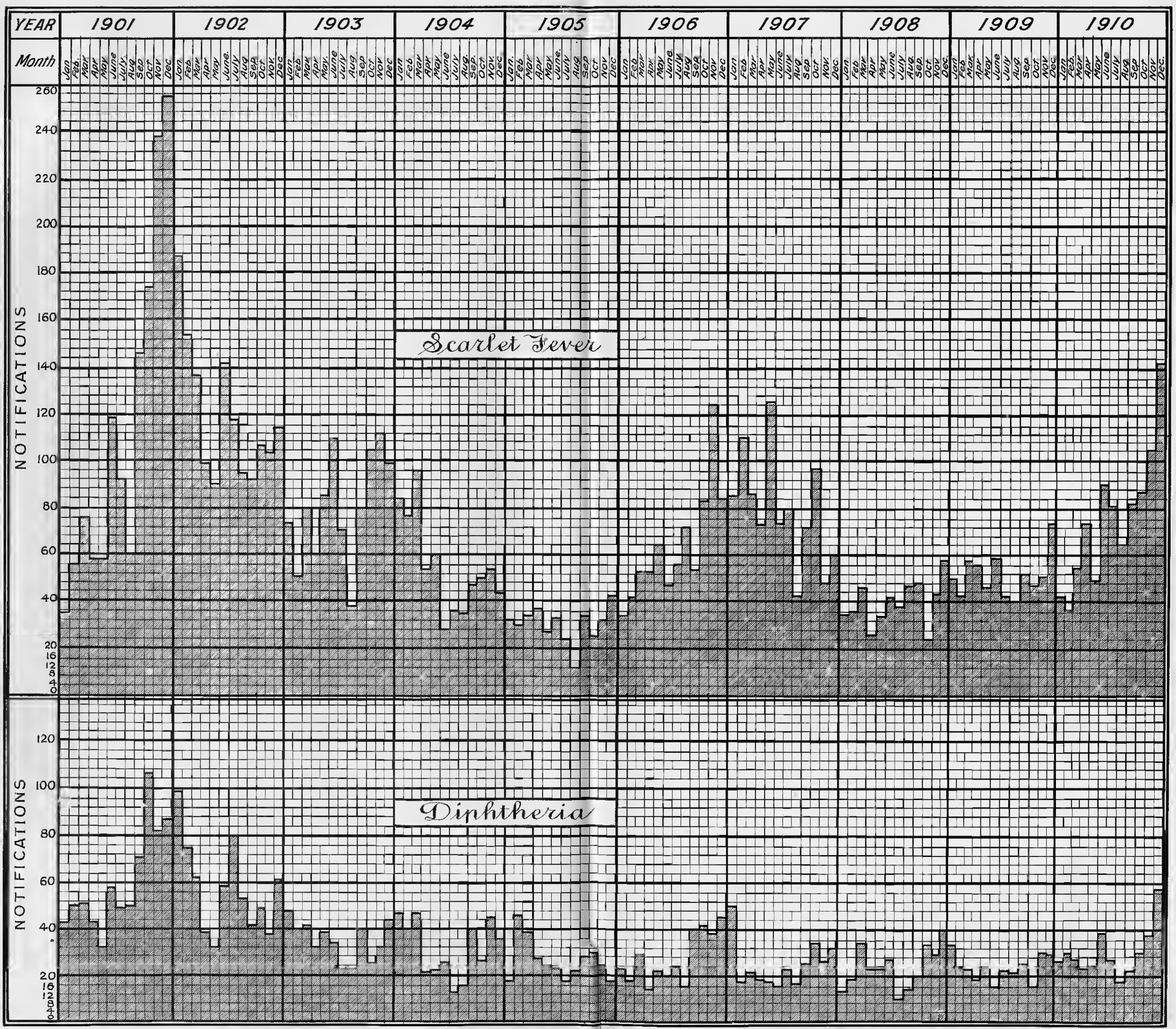
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Totals.
East Cardiff	32	39	29	58	158
Central ,,	30	17	19	34	100
West ,,	21	30	19	35	105
	83	86	67	127	363

The number of notifications and the rate of fatality at various age periods during 1910 are shown below :—

Ages.	Cases Notified.	Deaths.	Mortality per cent. of Cases notified.
0—1 year	12	2	16·6
1—5 years	94	13	13·8
5—15 ,,	176	8	4·5
15—25 ,,	37	—	—
25—65 ,,	44	1	2·2

Chart F

SHOWING THE NOTIFICATIONS OF SCARLET FEVER AND DIPHTHERIA IN EACH MONTH DURING THE YEARS 1901–1910.



From the foregoing figures it will be seen that the chief incidence of the disease falls upon children at school ages, and it is evident that the facilities for infection are increased by the aggregation of children in the elementary schools, at ages when they are particularly susceptible to infection.

Infected children and children from infected houses are excluded from school until the house is certified by the Medical Officer of Health to be free from infection, and the certificates of re-admission are, of course, in many cases based upon information received from the medical practitioner attending the case. Facilities for the bacteriological examination of the throats, &c. of convalescents from diphtheria are provided, and the examination of specimens for diphtheria are made at the Public Health Laboratory free of charge.

XLVIII.

Diphtheria and Membranous Croup.

Year.	Population.	No. of Cases Notified.	Attack rate per 1,000.	No. of Deaths.	Death rate per 1,000.	Percentage Removed to Hospital.	Mortality per cent. of Cases Notified.
1890	117,012	72	0·61	15	0·12	—	20·8
1891	130,283	70	0·53	16	0·12	—	22·8
1892	132,895	164	1·23	36	0·27	—	21·9
1893	136,168	479	3·51	93	0·68	—	19·4
1894	139,519	343	2·45	59	0·42	—	17·2
1895	142,958	248	1·73	46	0·32	3	18·5
1896	146,479	306	2·08	55	0·37	3	17 9
1897	150,087	516	3·43	90	0·59	15	17·4
1898	153,783	960	6·24	129	0·83	21	13·4
1899	157,414	640	4·06	61	0·38	46	9·5
1900	161,452	714	4·42	81	0·50	53	11·3
1901	165,308	734	4·44	78	0·47	47	10·6
1902	168,909	701	4·15	88	0·52	46	12·5
1903	172,598	438	2·53	36	0·20	51	8·2
1904	176,313	406	2·30	31	0·17	47	7·6
1905	180,054	327	1·81	23	0·12	56	7·0
1906	183,823	333	1·81	13	0·07	56	3·9
1907	187,620	304	1·62	23	0·12	59	7·6
1908	191,446	291	1·52	22	0·11	62	7·5
1909	195,303	283	1·44	14	0 07	62	4·9
1910	199,189	363	1·82	24	0·12	68	6·6

ENTERIC FEVER.—The number of deaths registered from enteric fever during the year amounted to seven, and were equivalent to an annual death-rate of 0·03 per 1,000 persons living. The rate in 1909 was also 0·03 per 1,000, and the average death-rate in the five years 1905–1909 was 0·05.

The mortality from this disease in the year 1910 throughout the country was as follows:—

	Death-rate per 1,000.
England and Wales	0·05
77 Great Towns	0·05
136 Smaller Towns	0·05
CARDIFF	0·03

The number of cases of enteric fever notified during 1910 was 36; of these 24, or 66·6 per cent. were removed to the Isolation Hospital.

The number of cases of enteric fever notified since the Infectious Disease (Notification) Act came into force is shown in the following table, which also shows the attack-rate, the death-rate, and the proportion of deaths to cases notified.

TABLE XLIX.

Enteric Fever.

Year.	Population.	No. of Cases Notified.	Attack rate per 1,000.	No. of Deaths.	Death rate per 1,000.	Percentage removed to Hospital.	Mortality per cent. of cases notified.
1890	117,012	150	1·28	23	0·19	—	15·3
1891	130,283	130	0·99	26	0·19	—	20·0
1892	132,895	118	0·88	24	0·18	3	20·3
1893	136,168	103	0·75	18	0 13	12	17·4
1894	139,519	62	0·44	7	0·05	1	11·2
1895	142,958	79	0·55	14	0·09	13	17·7
1896	146,479	74	0·50	13	0·08	28	17·0
1897	150,087	117	0·77	20	0·13	34	17·0
1898	153,783	80	0·52	17	0·11	23	21·2
1899	157,414	94	0·59	19	0·12	52	20·2
1900	161,452	95	0·58	25	0·15	47	26·3
1901	165,308	73	0·44	11	0·06	57	15·0
1902	168,909	69	0·40	9	0·05	68	13·0
1903	172,598	100	0·57	14	0·08	76	14·0
1904	176,313	40	0·22	9	0·05	57	22·5
1905	180,054	39	0·21	8	0·04	58	20·5
1906	183,823	77	0·41	13	0·07	69	16·9
1907	187,620	62	0·33	13	0·07	56	21·0
1908	191,446	55	0·29	7	0·03	76	12·7
1909	195,303	46	0·23	7	0·03	78	15·2
1910	199,189	36	0·18	7	0·03	66	19·4

The following table shows the death-rates per 1,000 from enteric fever in periods since the year 1875.

Death-rate from Enteric Fever per 1,000 persons living :—

1875—80	1881—90	1891—1900	1901—1910	1910
0·37	0·33	0·14	0·07	0·03

From the foregoing tables it will be seen that the low rate of mortality from enteric fever in Cardiff has been maintained. The decline in the prevalence of this disease is one of the most satisfactory features in the sanitary condition of the town, and must be attributed to the extensive public works and improvements which have been undertaken by the Sanitary Authority. Probably the most important factor influencing the decrease in the amount of enteric fever is the excellent quality and abundant supply of pure water provided for the inhabitants of the City and surrounding district. A complete scheme of sewerage and the substitution of the water carriage system of disposal in place of privies and cesspools (now entirely abolished), and a general improvement in the sanitary administration have also exerted a favourable influence in the same direction.

Of the 36 notified cases of enteric fever, 20 were males and 16 were females. Five cases had their origin outside the city. Upon examination of the premises occupied by persons suffering from the disease, defective drainage or some other sanitary defect was found in nine instances. In six cases it was stated that the patients had consumed shell-fish shortly before the commencement of the illness. In one of the houses in which cases of enteric fever occurred, two persons were attacked with the disease.

PULMONARY TUBERCULOSIS.—The deaths from all forms of tuberculosis during the year 1910 amounted to 304, including 216 from pulmonary tuberculosis or phthisis. The mortality from phthisis was equal to an annual death-rate of 1·08 per 1,000, as compared with 1·21, the average rate in the ten years 1900–1909.

The mortality from Phthisis in Cardiff since the year 1880 is shown in the following Table :—

TABLE L.

Year.	Death-rate per 1,000.	Year.	Death-rate per 1,000.
1880	3·21	1895	1·67
1881	2·96	1896	1·38
1882	2·86	1897	1·99
1883	2·67	1898	1·32
1884	2·97	1899	1·32
1885	3·58	1900	1·25
1886	2·78	1901	1·05
1887	2·72	1902	1·29
1888	2·80	1903	1·19
1889	2·79	1904	1·36
1890	3·18	1905	1·28
1891	2·78	1906	1·20
1892	1·82	1907	1·17
1893	1·68	1908	1·09
1894	1·62	1909	1·19
		1910	1·08

TABLE LI.

Death-rates from Phthisis per 1,000 persons living in the several Municipal Wards:—

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
CARDIFF	1·05	1·29	1·19	1·36	1·28	1·20	1·15	1·09	1·19	1·08
Roath Ward	0·60	1·01	0·70	1·45	1·12	0·74	0·72	0·71	0·96	1·18
Park ,,	1·10	0·60	0·80	1·01	0·89	0·69	0·79	0·82	0·95	0·92
Splott ,,	0·50	0·90	0·60	0·54	0·96	1·12	0·59	0·81	0·69	0·76
Central ,,	1·20	1·60	1·60	1·83	1·43	1·23	0·62	1·22	0·81	1·77
South ,,	0·90	1·90	1·30	2·15	1·30	1·15	1·54	1·53	1·40	2·50
Cathays ,,	0·30	0·50	0·70	0·84	0·88	0·67	0·75	1·04	0·72	1·02
Adamsdown Ward	0·90	1·10	1·50	1·03	0·95	1·96	1·59	1·09	1·42	1·24
Riverside ,,	0·70	1·70	0·50	0·66	1·00	0·94	1·00	1·48	0·60	1·27
Canton ,,	0·70	0·40	0·50	0·88	1·17	0·78	1·02	0·76	0·98	1·05
Grangetown ,,	0·70	0·70	1·10	1·27	1·21	1·34	1·10	0·90	1·09	1·08

The continuous decline in the rate of mortality from this disease in Cardiff since the year 1875 is shown in Chart G. Chart H. shows the mortality rates amongst males and females respectively for a portion of the period.

The mortality from diseases of the respiratory organs, other than phthisis, is also included in Chart G, for the following reasons. In the earlier part of the period to which the chart refers, owing to imperfect methods of diagnosis and to carelessness in certifying and registering deaths, many cases of

fatal illness were attributed to phthisis which should more properly have been referred to other causes. Any chronic chest affection usually received the name of consumption, and deaths from such affections would be registered as due to phthisis, although in many instances they should more properly have been included amongst the deaths from diseases of respiratory organs, other than phthisis, such as bronchitis and pneumonia. The readings of the chart are therefore subject to this probable source of error, and some allowance must be made for the transference from phthisis to diseases of the respiratory organs, resulting from the more accurate statement of the causes of death which has taken place in recent years.

For these reasons the decline in the rate of mortality from phthisis, although undoubtedly considerable, is probably not so great as would appear from these readings. It must also be borne in mind that in the earlier years the proportion of uncertified deaths (deaths not certified by medical practitioners) was much higher than it is at the present time, and that many such deaths would be incorrectly attributed to consumption by ignorant relatives of the deceased. In this connection it is of interest to note that even at the present time the proportion of uncertified deaths is found to be greatest in certain Welsh counties in which the death-rate from phthisis is excessively high.

It is a hopeful sign that the general public is now taking a keen interest in all the recent measures and proposals for the prevention of consumption. In Wales a national memorial to the late King Edward VII. has assumed the appropriate form of a campaign against tuberculosis. Owing to the magnificent generosity of some influential residents in the principality, and the support of all classes of the community, the Executive Committee connected with the Memorial are likely soon to be in a position to undertake comprehensive and well directed measures for stamping out a communicable disease which kills annually about 40,000 persons (for the most part young adults) in England and Wales. The responsibility of suggesting measures suitable to each locality naturally rests with the official advisers to the several sanitary authorities.

The preventive measures already undertaken in Cardiff have been set forth in detail in previous annual reports, and to these it is unnecessary to refer. The Health Committee felt, however, that notwithstanding the improvement which had already been effected, as shown by the reduced mortality from phthisis, further efforts should be made in the same direction. Upon the application of the Committee the consent of the Council was obtained to the establishment of a Municipal Tuberculosis Dispensary.

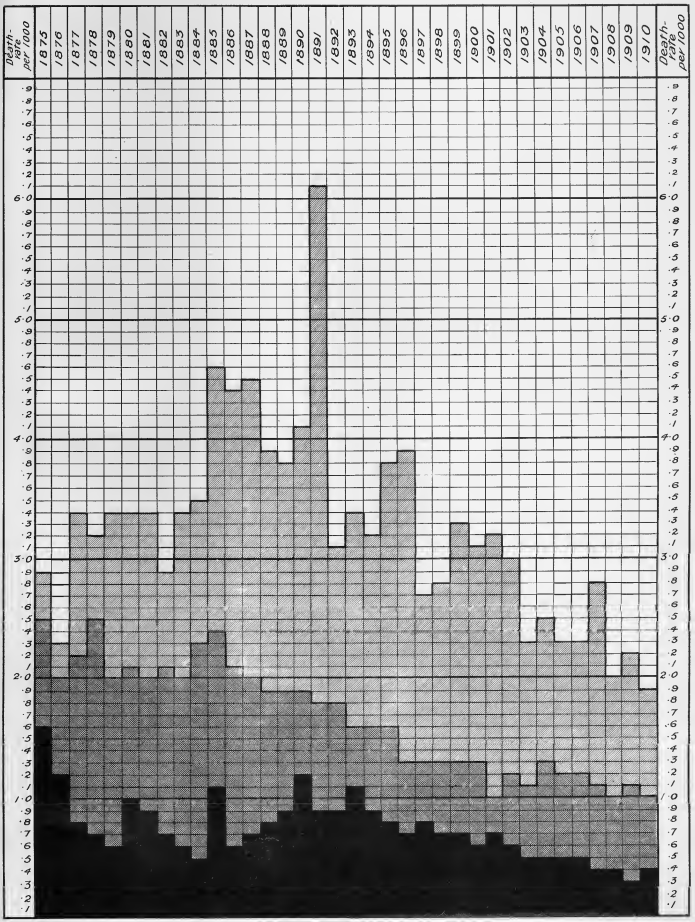
At a meeting of the Health and Port Sanitary Committee, held on 18th July, 1910, it was resolved to establish a Municipal Tuberculosis Dispensary as an experiment for a period of one year from the 1st October, 1910, and to appoint Dr. E. F. Thomas, the Assistant Medical Officer of Health, to take direct charge of the Dispensary under the Medical Officer of Health. The Institution was therefore opened to the poor of the town in October, and has been well attended since that date.

If this disease is to be stamped out entirely, or even controlled to any considerable extent, combined efforts on the part of all sanitary authorities and poor law authorities in the country will be necessary, but until that desirable combination is effected, it behoves each authority to do the best for the community under their immediate jurisdiction. To this end, a clear view of the principal predisposing causes of the disease is essential. It would appear that the liability to phthisis begins somewhere about the fifteenth year of life, and that amongst males the maximum rate of mortality is reached at the age period 45–55 years, after which it rapidly declines. The maximum amongst females is reached somewhat earlier. The mortality is higher amongst males than amongst females, and on the whole it is higher in registration counties containing large manufacturing towns and densely populated districts than in agricultural counties. Wales, however, seems to a certain extent to be an exception to this rule, as for some reasons which are not quite clear, the counties in which the death-rates from phthisis are excessively high contain no large urban districts. Urbanization therefore favours the spread of phthisis. The undue aggregation of persons upon a limited area of ground, such as occurs in the slums of many of our large towns, with, of course, all the attendant evils of overcrowding, evidently act as powerful predisposing causes of the disease.

The death-rate from phthisis in Cardiff is comparatively low, and the figures at our disposal do not justify the conclusion that the disease prevails much more extensively in any particular part of the

Chart G

SHOWING THE DEATH-RATES PER 1000 OF THE POPULATION FROM RESPIRATORY DISEASES, PULMONARY TUBERCULOSIS AND OTHER TUBERCULOUS DISEASES IN CARDIFF, DURING THE YEARS 1875-1910.



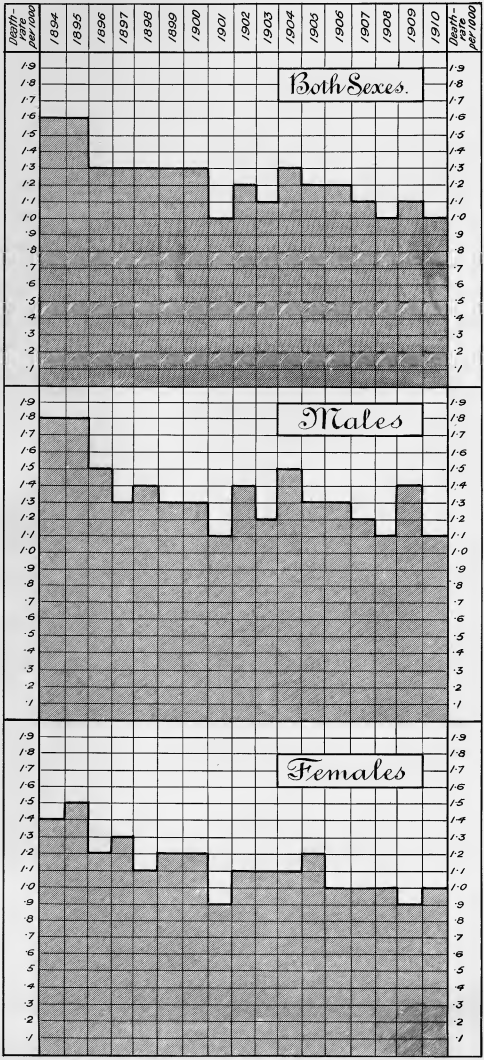
Respiratory Diseases

Pulmonary Tuberculosis

Other Tuberculous Diseases

Chart H

SHOWING THE DEATH-RATES FROM PULMONARY TUBERCULOSIS IN CARDIFF DURING THE YEARS 1894–1910.



town The distribution of the mortality in the several municipal wards, as shown in Table LI., indicates that fatal phthisis is to some extent more prevalent in the Central, South, and Adamsdown Wards than in other parts of the town. This is what one would expect, as these wards contain most of the old streets and houses, built without sufficient regard to air space and sanitation, and occupied for the most part by a poor class of persons, many of whom from their uncleanly and improvident habits easily fall victims to phthisis. Overcrowding, such as could be dealt with under any legal enactment, does not exist to any extent. Very few tenement houses, and none of those large barrack-like tenement dwellings, containing crowds of artizans and their families, which are so common in some of the large northern and midland towns, are to be found. Most of the courts, and with one or two exceptions, all the back-to-back houses, have been closed under the old Housing of the Working Classes Acts. The new Housing, Town Planning, &c. Act gives more extensive powers for dealing with unsatisfactory housing conditions than these older Acts, and it imposes upon the Medical Officer of Health the duty of submitting to the Sanitary Authority, from time to time, lists of streets and houses, which, in his opinion, require inspection, with a view of ascertaining the existence of any houses which could be dealt with by Closing Orders under Section 17 of the Act, the Closing Orders being now made by the Sanitary Authority, instead of by a Court of Summary Jurisdiction. This Act, if properly enforced, will doubtless be the means of reducing the death-rate from phthisis, not only by removing congested areas from the central districts, but also by controlling the building operations in the outskirts of towns.

The following report upon the working of the Municipal Tuberculosis Dispensary is submitted by Dr. E. F. Thomas :—

The Dispensary was opened on October 1st, 1910, and consists of two rooms in the basement of the City Hall, one being used as a waiting room for patients, and the other for the examination of patients, dispensing of drugs, etc. The hours of attendance are from 6–8 p.m. on three evenings per week—Monday, Wednesday and Friday.

During October to December, 300 patients attended the Dispensary, and the attendance of old and new cases averaged from 20 to 25 per evening. The Lady Health Visitor paid 485 visits to the homes of the patients attending the Dispensary, and discovered a large number of contact cases, which attended the Dispensary, and were kept under control.

The existing accommodation at the City Hall is quite inadequate for the work to be properly carried on, and no opportunity is afforded for laryngoscopic work, which is carried on as a routine part of the work in a well equipped Dispensary. The systematic home visitation by the Medical Officer of the Dispensary is an *essential* feature of the dispensary system, as carried on at Edinburgh and London, and on the Continent and U.S.A., for the purpose of inspecting, and wherever possible, improving the home conditions, and the examination of contact cases. The work is of so exacting and widespread a character as to require the services of a whole time Medical Officer.

At Paddington, with a similar population to Cardiff, two whole time Medical Officers are employed, and steps should certainly be taken in Cardiff to secure the services of at least one whole time Medical Officer at the earliest possible moment.

The work is rapidly increasing, and attendances of from 30 to 40 patients of an evening are common, and it is impossible under existing conditions to properly carry on the work as it should be done under the proper dispensary system. There are at present over 500 patients' names on the books, and Dr. R. W. Philip, of Edinburgh, the founder of the dispensary system, estimates that there are at least ten times as many living consumptives suffering from active or incipient consumption as those who die. In Cardiff the deaths from Tuberculosis in all forms numbered 304 during the year 1910, and it is no exaggeration to estimate the total number of consumptives in the city as *at least* 3,000.

A number of cases also visit the Dispensary from surrounding districts, and patients have attended from Merthyr, Aberdare, Ferndale, Port Talbot, etc., whilst several have attended from the neighbouring districts of Whitchurch, St. Fagans and Barry.

Secondary to the question of providing a whole time Medical Officer for the Dispensary, arise the provision of suitable hospital accommodation for advanced cases of consumption, to avoid home infection and dissemination of disease, and also proper open-air treatment for early curable cases.

In conclusion, I would desire to acknowledge the great assistance given to the Dispensary by the Lady Health Visitor, Miss Gertrude Wade, who has worked most indefatigably since the opening, in the carrying out of onerous and most difficult duties, requiring endless tact and patience.

Tables shewing the wards from which patients are drawn, age periods, diagnosis of cases, and illustrative family histories are appended. Bacteriological examinations were made by me of all doubtful cases, and proved of great value in deciding doubtful cases.

Tables relating to the Tuberculosis Dispensary :—

TABLE I.

The following table gives the distribution in Municipal Wards of the cases of consumption attending the Tuberculosis Dispensary :—

WARD.	MALES.	FEMALES.	TOTALS.
Central	10	11	21
South	13	18	31
Cathays	22	18	40
Adamsdown	11	6	17
Riverside	5	3	8
Canton	17	8	25
Grangetown	15	7	22
Roath	17	7	24
Park	17	17	34
Splott	5	5	10
Totals	132	100	232

TABLE II.

The following table gives the age periods of persons suffering from consumption who attended the Dispensary during October, November, and December, 1910.

AGES.	PERSONS.	MALES.	FEMALES.
All ages	232	132	100
0— 1 year	—	—	—
1— 5 years	23	12	11
5—15 ,, ...	108	61	47
15—25 ,, ...	33	22	11
25—65 ,, ...	67	37	30
65 years and upwards	1	—	1

TABLE III.

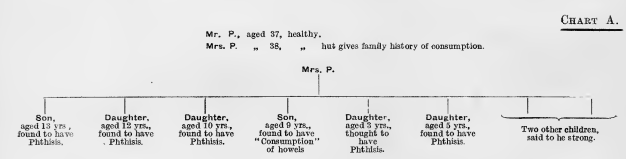
DIAGNOSIS OF 300 PATIENTS.

Ages.	0—1			1—5			5—15			15—25			25—65			65 and upwards.			All ages.		
Sex.	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females	Total
Pulmonary Tuberculosis — Definite	...	...	...	3	3	6	37	30	67	14	8	22	32	16	48	...	1	1	86	58	144
Pulmonary Tuberculosis — Suspected	...	...	...	1	2	3	10	8	18	6	3	9	5	13	18	...	...	...	22	26	48
Other Forms	...	...	...	8	6	14	14	9	23	2	...	2	...	1	1	..	...	...	24	16	40
Non-Tuberculous	...	5	2	7	5	4	9	5	12	17	4	7	11	7	15	22	1	1	2	27	41	68

Occupations of the 232 patients found to be suffering from Consumption and who attended the Tuberculosis Dispensary during October, November and December, 1910.

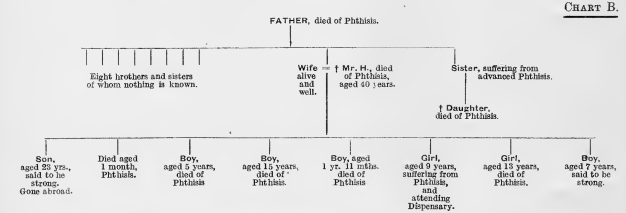
Assistant Carriage Builder	1	Errand Boy	1
Bakers	2	Gardener	1
Barman	1	Gas Fitter	1
Brass-moulder	1	Housewives	16
Brewer's Assistant	1	Haulier	1
Cab Driver	1	Labourers	14
Caretaker	1	Lamplighter	1
Carpenter	1	Miller	1
Charwoman	1	Painters	4
Chemist's Assistant	1	Porter	1
Clerks	3	Scholars (boys)	61
Chauffeur	1	,, (girls)	42
Coal-tipper	1	Shoemaker	1
Collier	1	Stores Assistants	2
Compositors	3	Upholsterers	2
Dockgateman	1	Waitress	1
Domestic Servants	4	No Occupation	51
Dressmakers	2		
Electrician	1	Total	232
Engineers	3		

CHART A.


Mr. P., aged 37, healthy.
Mrs. P. „ 38, „ but gives family history of consumption.
Mrs. P.
Son, aged 13 yrs., found to have Phthisis.
Daughter, aged 12 yrs., found to have Phthisis.
Daughter, aged 10 yrs., found to have Phthisis.
Son, aged 9 yrs., found to have "Consumption" of bowels
Daughter, aged 5 yrs., thought to have Phthisis.
Daughter, aged 3 yrs., found to have Phthisis.
Two other children, said to be strong.

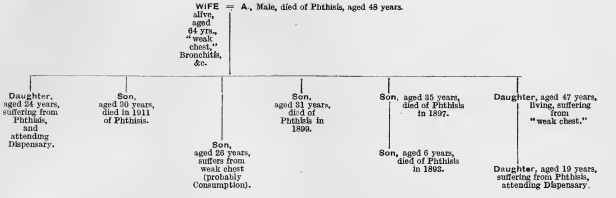
The above case well illustrates the spread of consumption by contact. Six children out of eight in this family shewed definite signs of consumption and attended the Dispensary. The housing accommodation is very poor, and consists of a small house in a court.

CHART B.


FATHER, died of Phthisis.
Eight brothers and sisters of whom nothing is known.
Wife = alive and well.
† Mr. H., died of Phthisis, aged 40 years.
Sister, suffering from advanced Phthisis.
† Daughter, died of Phthisis.
Son, aged 23 yrs., said to be strong. Gone abroad.
Died aged 1 month, Phthisis.
Boy, aged 5 years, died of Phthisis
Boy, aged 15 years, died of Phthisis.
Boy, aged 1 yr. 11 mths. died of Phthisis
Girl, aged 9 years, suffering from Phthisis, and attending Dispensary.
Girl, aged 13 years, died of Phthisis.
Boy, aged 7 years, said to be strong.

The above case shews a marked family history of consumption, extending from the Grandfather, who died of phthisis, to the present generation, who are nearly all affected, probably by contact. Five of the latter have died from consumption, and one daughter, aged 9 years, also consumptive, is attending the Dispensary.

CHART C.


WIFE = A., Male, died of Phthisis, aged 48 years.
alive, aged 64 yrs., "weak chest," Bronchitis, &c.
Daughter, aged 24 years, suffering from Phthisis, and attending Dispensary.
Son, aged 30 years, died in 1911 of Phthisis.
Son, aged 25 years, suffers from weak chest (probably Consumption).
Son, aged 21 years, died of Phthisis in 1899.
Son, aged 35 years, died of Phthisis in 1897.
Son, aged 6 years, died of Phthisis in 1893.
Daughter, aged 47 years, living, suffering from "weak chest."
Daughter, aged 19 years, suffering from Phthisis, attending Dispensary.

The above history shews how family contact with consumptives spreads the disease. Three sons of "A" (who died of phthisis) were also affected and died. Of the two daughters, one suffering from consumption attends the Dispensary, the other suffers with her chest and is bronchitic, and has a daughter suffering from consumption attending the Dispensary. The other son of "A" also suffers from a weak chest, and is probably consumptive.

E. FAIRFIELD THOMAS,

Medical Officer.

February, 1911.

DISINFECTION.—During the year the routine disinfection comprised the following:—

Houses Disinfected	1,303
School class-rooms disinfected	145
Articles of bedding, clothing, &c., disinfected	10,192
" " " destroyed	104

Infected premises are disinfected either by fumigation with sulphur dioxide, with formaldehyde, or by means of a spray of formalin. Articles of clothing and bedding are for the most part removed from the house in which the infectious disease occurred to the temporary disinfecting station in Sloper Road, and submitted to disinfection by saturated steam, at a pressure of 30lbs on the square inch, in a Washington Lyons' high pressure steam disinfecting apparatus. The unsatisfactory condition of this temporary structure has been commented upon from time to time, and the Sanitary Authority has made application to the Local Government Board for permission to borrow money to enable them to construct a permanent Disinfecting and Cleansing Station upon ground belonging to the Corporation adjacent to the Mortuary.

CARDIFF SANATORIUM.

The following Report of the Medical Superintendent shows that during the year 1910, 1,088 cases of infectious disease were under treatment, as compared with 811 in the year 1909.

	0 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 35 years.	35 to 45 years.	45 to 55 years.	Totals.
Remaining in Hospital 31st December, 1909—							
Scarlet Fever	21	54	4	3	—	—	82
Diphtheria	3	7	3	2	1	—	16
Enteric Fever	—	2	2	—	—	—	4
Totals	24	63	9	5	1	—	102
Admitted during the year 1910 :—							
Scarlet Fever	214	426	46	19	6	1	712
Diphtheria	60	130	32	15	6	2	245
Enteric Fever	1	7	9	5	4	1	27
Small Pox	—	—	1	—	—	—	1
Measles	—	—	1	—	—	—	1
Totals	275	563	89	39	16	4	986
Totals under treatment in 1910	299	626	98	44	17	4	1,088
Of the above there were discharged :—							
(*a*) Recovered—							
Scarlet Fever	199	380	40	17	5	1	642
Diphtheria	53	114	31	16	7	2	223
Enteric Fever	1	9	8	5	3	1	27
Measles	—	—	1	—	—	—	1
Totals	253	503	80	38	15	4	893
(*b*) Died—							
Scarlet Fever	7	4	—	—	1	—	12
Diphtheria	4	5	—	—	—	—	9
Enteric Fever	—	—	2	—	—	—	2
Small Pox	—	—	1	—	—	—	1
Totals	11	9	3	—	1	—	24
Remaining in Hospital 31st December, 1910 :—							
Scarlet Fever	29	96	10	5	—	—	140
Diphtheria	6	18	4	1	—	—	29
Enteric Fever	—	—	1	—	1	—	2
Totals	35	114	15	6	1	—	171
Totals under treatment in 1910	299	626	98	44	17	4	1,088

Mortality per cent. under treatment—

Scarlet Fever ... 1·6 Diphtheria ... 3·4 Enteric Fever ... 6·4

B. W. BROAD, *Medical Superintendent.*

CARDIFF METEOROLOGICAL STATION.

The Cardiff Meteorological Station is situated at Penylan, on land belonging to the Corporation (Waterworks Department).

The Meteorological Station is under the control of the Medical Officer of Health. Mr. T. Chant, his Chief Clerk, is the Assistant Meteorologist, and takes the readings of the instruments at 9 a.m. daily, and performs all statistical and other clerical work connected with the observations. The 9 p.m. readings are taken by Mr. W. J. Mellings, Caretaker of the Penylan Waterworks and Public Telescope.

The geographical position of the Cardiff Meteorological Station is, Latitude 51° 30′ N., Longitude 3° 10′ W., and the height of the Station above mean sea level is 203 feet.

The Meteorological Station is recognised by the Meteorological Office, London, as a Station of the "Second Order," and is periodically inspected by an Inspector from that Office, who has on each occasion reported favourably upon the arrangements at the Station, and upon the way in which the observations are taken and the records kept.

The averages with which the monthly rainfall and mean temperatures are compared are those for the twenty-one years 1889–1909, and the sums following the signs + and — in the following Tables show respectively the difference from the average, either above or below.

TABLE LII.

BAROMETRIC PRESSURE AND RELATIVE HUMIDITY.

1910.	Mean Barometric Pressure*		Hygrometer*		
	Uncorrected.	At M.S.L. and 32°F.	Dry-bulb (mean)	Wet-bulb (mean)	Mean Relative Humidity.
	in.	in.	°F.	°F.	%
January	29·662	29·863	40·5	39·5	92
February	29·432	29·633	41·7	40·2	87
March	29·956	30·156	42·5	39·9	80
April	29·662	29·848	44·7	42·3	82
May	29·740	29·910	52·2	48·7	76
June	29·750	29·901	57·4	54·5	82
July	29·748	29·895	57·6	54·4	81
August	29·751	29·890	58·7	56·5	86
September	30·095	30·249	55·0	52·4	82
October	29·844	30·012	50·7	49·1	89
November	29·459	29·657	39·1	37·6	87
December	29·482	29·674	43·8	42·7	91
Means	29·715	29·891	48·6	46·5	85

* From observations at 9 a.m. and 9 p.m.

TABLE LIII.

TEMPERATURE.

1910.	Maximum.	Minimum.	Mean of Maximum.	Mean of Minimum.	Mean Temperature	Difference from Average (21 years).
	°F.	°F.	°F.	°F.	°F.	°F.
January	52·6	18·0	43·8	35·2	39·5	+0·9
February	52·9	32·0	47·4	37·0	42·2	+2·5
March	57·6	30·3	50·5	36·2	43·3	+1·0
April	56·5	29·4	51·3	39·0	45·1	—1·2
May	73·2	33·1	60·2	45·0	52·6	+0·3
June	76·8	43·0	65·2	50·7	57·9	+0·6
July	74·9	47·0	64·5	51·5	58·0	—2·6
August	72·7	47·5	65·1	53·2	59·2	—0·9
September	68·1	38·4	62·5	48·5	55·5	—0·9
October	64·1	39·0	55·5	46·3	50·9	+0·8
November	51·8	25·7	45·5	34·2	39·8	—4·7
December	55·2	27·2	48·1	39·7	43·9	+3·7
	Max.	Min.	Mean	Mean	Mean	
	76·8	18·0	54·9	43·0	48·9	—0·1

TABLE LIV.

SOLAR AND TERRESTRIAL RADIATION, UNDERGROUND TEMPERATURE, AND SUNSHINE.

1910.	Temperature.				Bright Sunshine.
	Solar Maximum (Mean).	Grass Minimum (Mean).	Underground (Mean).		
			1 ft.	4 ft.	
	°F.	°F.	°F.	°F.	hrs.
January	63·6	32·1	40·3	43·9	56·2
February	85·4	33·5	40·5	42·4	105·3
March	96·2	30·2	42·4	43·7	166·2
April	100·9	34·1	46·1	45·6	141·0
May	117·5	40·8	52·5	48·8	233·9
June	122·0	48·0	60·1	54·9	195·8
July	119·7	49·2	59·7	56·9	185·8
August	115·0	50·8	60·7	58·0	160·9
September	109·3	44·0	57·0	57·1	148·5
October	87·2	43·8	52·4	54·5	73·4
November	71·0	30·3	41·5	48·5	90·7
December	64·2	36·9	42·4	46·6	42·1
	Mean	Mean	Mean	Mean	Total.
	96·0	39·5	49·6	50·0	1599·8

Chart I

SHOWING RAINFALL, MEAN BAROMETRIC PRESSURE AND MEAN TEMPERATURE RECORDED AT THE METEOROLOGICAL STATION, PENYLAN, CARDIFF, DURING EACH WEEK OF THE YEAR 1910.

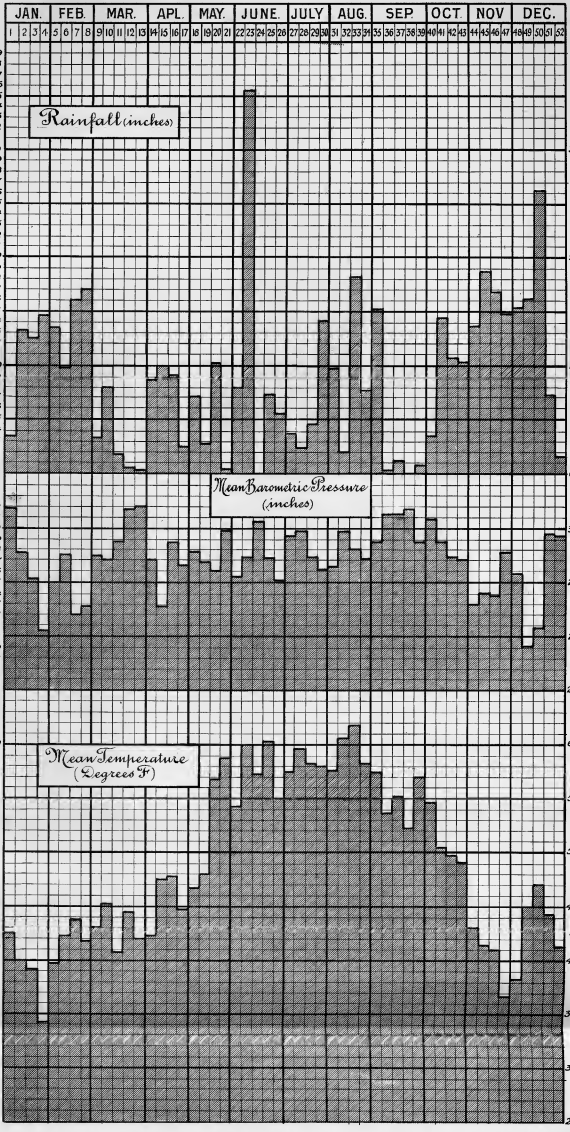


TABLE LV.

RAINFALL.

1910	Amount.	Difference from Average (21 years)	*Greatest Fall in 24 hours	*Date of Greatest Fall	*No. of days with Rain (0·01 in. or more)
	ins.	ins.	ins		
January	4·75	+1·31	0·67	23rd.	24
February	5·53	+2·98	0·72	6th.	27
March	1·15	—1·79	0·31	7th. 9th.	11
April	3·09	+0·38	0·76	6th.	21
May	2·83	+0·53	0·51	19th.	22
June	4·67	+2·06	2·06	5th.	18
July	2·70	+0·12	0·86	24th.	14
August	5·31	+1·18	0·89	18th.	24
September	0·18	—2·68	0·12	14th.	5
October	4·69	—0·17	0·89	27th.	20
November	6·68	+3·41	1·07	23rd.	22
December	5·62	+1·22	1·10	15th.	27
	Total 47·20	+8·54	2·06	5th June	Total 235

* 24 hours ending 9 a.m. next day.

CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY.

The following statement shows the work carried out in the Laboratory during the year 1910 :

SAMPLES RECEIVED AND EXAMINED :—

Specimens, 1,305. Waters, 351. Sewages, &c., 125.

The figures for the year 1909 were :—

Specimens, 1,055. Waters, 349. Sewages, &c., 145.

BACTERIOLOGICAL Examinations :—

Suspected Diphtheria	583	
Suspected Typhoid Fever (Serum Diagnosis)	228	
Sputum for Tubercle Bacilli	287	
Diseased Meat	19	
Anthrax	13	
Pus Examinations	29	
Ringworm	3	
Other Examinations	33	
	—	1,195
Carried forward ...		1,195

Brought forward	...	1,195

CHEMICAL AND PATHOLOGICAL EXAMINATIONS :—

Urinalyses	89	
Milk Examinations	13	
School Air	4	
Other Examinations	4	
	——	110

SAMPLES OF WATER :—

Bacteriological Examinations	225	
Chemical Analyses	126	
	——	351

SEWAGES AND EFFLUENTS :—

Sewage and Sewage Effluents (Chemical Examinations)	71	
Trade Effluents (Chemical Examinations)	54	
	——	125
Total		1,781

The total number of specimens and samples examined during the year 1910, amounted to 1,781, as compared with 1,549 in the year 1909.

I have the honour to be,

My Lord Mayor and Gentlemen,

Your obedient Servant,

EDWARD WALFORD,

Medical Officer of Health.

APPENDIX.

CITY OF CARDIFF.

LOCAL GOVERNMENT BOARD TABLES. TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1910 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.	Number.	Rate*				Number.	Rate*
1	2	3	4	5	6	7	8	9	10	11	12	13
1900	161,452	5,198	35·2	730	141	2,745	17·0	314	78	...	2,667	16·5
1901	165,308	5,206	31·4	775	148	2,671	16·1	352	75	57	2,653	16·0
1902	168,909	5,278	31·2	769	145	2,909	17·2	486	88	44	2,865	16·9
1903	172,598	5,250	30·4	645	122	2,503	14·5	487	96	89	2,496	14·4
1904	176,313	5,208	29·5	751	144	2,704	15·3	458	96	87	2,695	15·2
1905	180,054	5,140	28·5	607	118	2,485	13·8	442	108	66	2,443	13·5
1906	183,823	5,001	27·2	675	134	2,689	14·6	531	135	64	2,618	14·2
1907	187,620	4,865	25·9	639	131	2,923	15·6	614	141	37	2,819	15·0
1908	191,446	5,172	27·0	644	124	2,610	13·6	522	136	64	2,538	13·2
1909	195,303	5,026	25·7	518	103	2,619	13·4	611	156	86	2,549	13·0
Averages for years 1900–1909	178,282	5,134	28·7	675	131	2,685	15·0	481	110	...	2,634	14·7
1910	199,189	4,822	24·2	537	111	2,454	12·4	541	165	67	2,356	11·8

* Rates in Columns 4, 8 and 13 are calculated per 1,000 of the estimated population.

LOCAL GOVERNMENT BOARD TABLE—TABLE II

VITAL STATISTICS OF SEPARATE LOCALITIES IN 1910 AND PREVIOUS YEARS.

Names of Localities.	CITY OF CARDIFF. (Whole District).				EAST CARDIFF. Registration Sub-District.				CENTRAL CARDIFF. Registration Sub-District.				WEST CARDIFF. Registration Sub-District.			
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under one year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under one year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under one year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under one year.
1900	161,452	5,198	2,667	730	51,035	1,658	755	214	54,358	1,510	907	229	55,874	2,030	1,005	287
1901	165,308	5,206	2,653	775	53,111	1,667	668	226	54,402	1,572	912	255	57,962	1,967	1,073	294
1902	168,909	5,278	2,865	769	56,613	1,694	733	241	54,541	1,624	1,010	230	60,476	1,960	1,122	298
1903	172,598	5,250	2,496	645	57,013	1,643	633	194	54,299	1,561	853	206	61,339	2,046	1,010	245
1904	176,313	5,208	2,695	751	57,930	1,626	719	224	55,219	1,575	884	218	61,421	2,007	1,092	309
1905	180,054	5,140	2,443	607	58,445	1,634	636	175	55,343	1,536	843	187	61,351	1,970	964	245
1906	183,823	5,001	2,618	675	59,009	1,554	680	188	55,424	1,541	920	216	62,419	1,906	1,018	271
1907	187,620	4,865	2,819	639	59,832	1,529	702	179	55,674	1,475	966	207	62,384	1,861	1,151	253
1908	191,446	5,172	2,538	644	60,766	1,569	659	180	56,196	1,555	825	181	63,411	2,048	1,054	283
1909	195,303	5,026	2,549	518	61,097	1,573	621	139	55,575	1,513	806	171	63,597	1,940	1,122	208
Averages of years 1900 to 1909	178,282	5,134	2,634	675	57,485	1,614	680	196	55,103	1,546	892	210	61,023	1,973	1,061	269
1910	199,189	4,822	2,356	537	60,773	1,515	683	158	57,801	1,452	863	190	63,818	1,855	810	189

LOCAL GOVERNMENT BOARD TABLE.

TABLE III.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1910.

NOTIFIABLE DISEASE.	Cases Notified in Whole District.							Total Cases Notified in each Locality.			No. of Cases Removed to Hospital from each Locality.			
	At all Ages.	At Ages—Years.						East Cardiff Regis. Sub-Dist.	Central Cardiff Regis. Sub-Dist.	West Cardiff Regis. Sub-Dist.	East Cardiff Regis. Sub-Dist.	Central Cardiff Regis. Sub-Dist.	West Cardiff Regis. Sub-Dist.	Total Cases removed to Hospital.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.							
Small-pox	1	...	...	...	1	...	...	...	1	...	...	1	...	1
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)...	363	12	94	176	37	44	...	158	100	105	113	71	63	247
Erysipelas	137	4	3	7	11	101	11	35	51	51	...	...	...	...
Scarlet Fever	887	8	259	540	52	28	...	398	236	253	317	194	186	697
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	36	...	1	8	12	15	...	8	15	13	5	9	10	24
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	8	...	...	...	2	6	...	2	1	5	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis, under the Regulations	166	...	3	14	22	120	7	50	75	41	...	...	...	...
Phthisis, Voluntary ...	180	...	3	26	43	107	1	63	75	42	...	...	...	...
Totals	1,778	24	363	771	180	421	19	714	554	510	435	275	259	969

LOCAL GOVERNMENT BOARD TABLE.

TABLE IV.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1910.

CAUSES OF DEATH.	Deaths in or belonging to whole District at subjoined Ages.							Deaths in or belonging to Localities (at all Ages).			Total Deaths in Public Institutions in the District.
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	East Cardiff Reg. Sub.-Dis.	Central Cardiff Reg. Sub.-Dis.	West Cardiff Reg. Sub.-Dis.	
Small-pox.	1	...	...	...	1	...	...	...	1	...	1
Measles	44	16	26	2	...	...	...	17	19	8	...
Scarlet Fever	19	...	11	8	...	...	...	10	4	5	14
Whooping Cough ...	21	11	10	...	...	...	...	3	11	7	...
Diphtheria (including Membranous Croup)	24	2	13	8	...	1	...	11	8	5	10
Croup	...	...	...	...	...	...	...	...	...	...	...
Fever { Typhus	...	...	...	...	...	...	...	...	...	...	...
Fever { Enteric ...	7	...	...	1	3	3	...	1	2	4	3
Fever { Other continued ...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza ...	13	1	...	...	...	6	6	2	6	5	...
Cholera	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	71	55	11	...	...	3	2	19	22	30	2
Enteritis	35	22	6	1	...	4	2	17	14	4	6
Gastritis	11	3	1	1	...	3	3	4	3	4	...
Puerperal Fever ...	6	...	...	...	1	5	...	2	1	3	...
Erysipelas	2	...	...	...	...	...	2	...	1	1	1
Phthisis (Pulmonary Tuberculosis) ...	216	2	3	13	53	137	8	58	85	73	57
Other Tuberculous Diseases	88	22	22	23	6	12	3	28	37	23	27
Cancer, Malignant Disease	143	...	...	1	1	97	44	40	47	56	56
Bronchitis	152	46	11	2	...	40	53	46	46	60	19
Pneumonia	213	46	37	8	9	86	27	63	66	84	40
Pleurisy	13	1	4	...	...	6	2	3	4	6	5
Other Diseases of Respiratory Organs ...	19	2	5	...	...	10	2	5	7	7	2
Alcoholism ... } Cirrhosis of Liver ... }	19	...	...	...	...	17	2	4	10	5	4
Venereal Diseases ...	15	8	...	...	...	5	2	2	11	2	6
Premature birth ...	96	96	...	...	...	...	...	34	28	34	4
Diseases and Accidents of Parturition ...	12	...	...	...	...	12	...	2	5	5	2
Heart Diseases	321	4	3	6	17	189	102	101	113	107	75
Accidents	92	7	10	11	4	47	13	31	34	27	47
Suicides	6	...	...	...	...	6	...	1	5	...	2
All other causes ...	697	193	31	17	33	194	229	185	261	251	158
All Causes ...	2,356	537	204	102	128	883	502	689	851	816	541

LOCAL GOVERNMENT BOARD TABLE. TABLE V.

INFANTILE MORTALITY DURING THE YEAR 1910

DEATHS FROM STATED CAUSES IN WEEKS AND MONTHS UNDER ONE YEAR OF AGE.

	CAUSE OF DEATH.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	Certified	114	41	23	22	200	59	49	43	36	33	17	24	21	13	20	22	537
	Uncertified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
i. Common Infectious Diseases.	Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	...	...	...	...	...	1	1	...	2	...	2	2	4	1	2	1	16
	Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diphtheria, including Membranous Croup	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2
	Whooping Cough	...	...	1	...	1	...	1	1	...	1	2	1	...	1	1	2	11
ii. Diarrhœal Diseases.	Diarrhœa, all forms ...	...	1	2	2	5	7	14	3	6	5	2	3	4	2	2	2	55
	Enteritis, Muco-enteritis, Gastro-enteritis	...	1	...	...	1	2	3	3	5	3	1	1	...	...	1	2	22
	Gastritis, Gastro-intestinal Catarrh	1	1	...	1	3	1	3	1	1	1	...	...	1	...	1	...	12
iii. Wasting Diseases	Premature Birth ...	66	13	4	6	89	5	1	...	...	1	...	...	...	...	...	...	96
	Congenital Defects ...	13	5	1	1	20	1	1	...	...	...	...	...	...	...	...	...	22
	Injury at Birth ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Want of Breast-milk, Starvation	...	...	...	...	...	3	2	1	...	1	...	...	...	...	...	...	7
	Atrophy, Debility, Marasmus	14	5	7	4	30	6	8	7	4	3	...	3	2	...	...	...	63
iv. Tuberculous Diseases.	Tuberculous Meningitis ...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	3
	Tuberculous Peritonitis: Tabes Mesenterica	...	1	...	...	1	4	2	6	...	2	2	...	...	...	1	...	18
	Other Tuberculous Diseases	...	...	...	...	...	1	...	...	...	...	1	...	...	...	1	...	3
v. Other Causes.	Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Syphilis	1	...	...	1	2	...	1	1	2	...	1	...	...	...	...	1	8
	Rickets	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2
	Meningitis (*not Tuberculous*)	1	...	...	...	1	...	...	...	2	3	...	3	...	1	1	...	11
	Convulsions	8	6	3	...	17	6	4	6	5	2	1	1	...	...	1	1	44
	Bronchitis	1	2	2	4	9	11	2	4	2	1	3	3	3	2	2	4	46
	Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pneumonia	...	1	1	1	3	4	5	5	4	4	1	4	3	2	5	6	46
	Suffocation, overlying ...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	3
	Other causes	9	5	2	2	18	7	1	3	1	5	1	2	...	4	2	3	47
	Totals	114	41	23	22	200	59	49	43	36	33	17	24	21	13	20	22	537

City of Cardiff.

Estimated Population

1910 – 199,189.

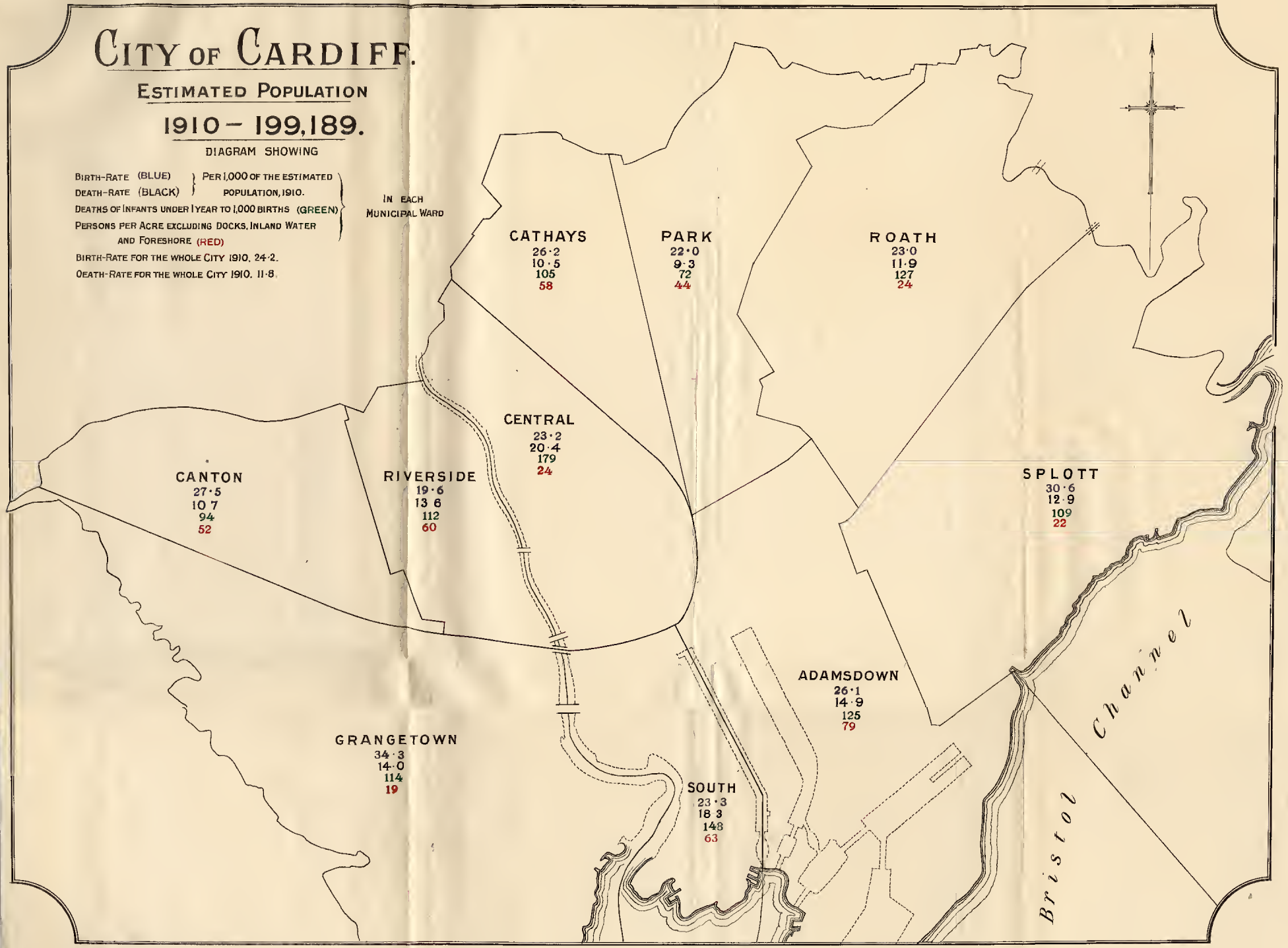
DIAGRAM SHOWING

Birth-Rate (BLUE) } Per 1,000 of the estimated
Death-Rate (BLACK) } population, 1910.
Deaths of Infants under 1 year to 1,000 births (GREEN)
Persons per Acre excluding Docks, Inland Water and Foreshore (RED)

In each Municipal Ward

Birth-Rate for the whole City 1910, 24·2.

Death-Rate for the whole City 1910, 11·8.



DEATHS FROM SPECIFIED CAUSES AT ALL AGES, AND AT SIX GROUPS OF AGES, IN CARDIFF DURING THE YEAR 1910.

Causes of Death.	0 to 1		1 to 5		5 to 15		15 to 25		25 to 65		65 and upwards.		All ages.			Rate per 1,000 persons living.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.	
Small-pox (Vaccinated)	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	0·00
Measles	11	5	12	14	1	1	...	...	...	...	...	...	24	20	44	0·22
Scarlet Fever	...	...	9	2	1	7	...	...	...	...	...	...	10	9	19	0·09
Epidemic Influenza	...	...	...	...	...	...	...	...	4	2	3	3	8	5	13	0·06
Whooping Cough	8	3	4	6	...	...	...	...	...	...	...	...	12	9	21	0·10
Diphtheria, Membranous Croup	1	1	2	11	3	5	...	...	1	...	...	...	7	17	24	0·12
Enteric Fever	...	...	...	...	1	...	3	2	1	...	...	...	2	5	7	0·03
Diarrhœa, Dysentery	22	11	3	2	...	...	...	...	3	...	...	2	28	15	43	0·21
Epidemic or Zymotic Enteritis	10	12	4	2	...	...	...	...	...	...	...	...	14	14	28	0·14
Other Allied Diseases	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
Syphilis	3	5	...	...	...	...	...	...	1	...	...	...	4	5	9	0·04
Gonorrhœa	...	...	...	...	...	...	...	...	4	...	2	...	6	...	6	0·03
Erysipelas	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	0·01
Puerperal Fever	...	...	...	...	...	...	...	1	...	5	...	...	...	6	6	0·03
Pyæmia, Septicæmia	...	...	...	...	...	2	...	...	1	...	...	...	3	...	3	0·01
Septic, Ulcerative or Infective Endocarditis	...	...	...	...	...	1	...	...	...	...	...	...	1	...	1	0·00
Other Allied Diseases	2	1	...	...	...	...	...	...	1	...	...	2	3	3	6	0·03
Rheumatic Fever	...	...	1	...	1	...	1	1	2	...	1	...	6	1	7	0·03
Rheumatism of the Heart	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	0·00
Tuberculosis of Brain or Meninges, Acute Hydrocephalus	1	2	7	6	6	8	...	...	1	...	...	...	14	17	31	0·15
Tuberculosis of Lungs, Phthisis, Phthisis Pulmonalis	1	1	2	1	3	10	23	30	76	61	5	3	110	106	216	1·08
Tuberculosis of Intestines, Tabes Mesenterica	10	5	2	3	...	2	1	...	1	...	1	...	15	10	25	0·12
General Tuberculosis, Tubercular disease of undefined position	...	1	1	2	2	3	4	1	2	4	...	1	9	12	21	0·10
Other forms of Tuberculosis, Scrofula	3	...	1	...	...	2	...	...	3	1	1	...	8	3	11	0·05
Chronic Alcoholism	...	...	...	...	...	...	...	...	3	3	...	...	3	3	6	0·03
Osteo-arthritis, Rheumatoid Arthritis	...	...	...	...	...	...	...	...	...	...	2	2	2	2	4	0·02
Cancer	...	...	...	...	...	1	2	...	47	49	20	24	69	74	143	0·71
Diabetes Mellitus	...	...	...	...	...	...	...	1	2	2	...	4	2	7	9	0·04
Purpura Hæmorrhagica	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	0·00
Anæmia, Leucocythæmia	...	...	...	...	...	1	1	2	7	3	...	...	8	6	14	0·07
Premature Birth	52	44	...	...	...	...	...	...	...	...	...	...	52	44	96	0·48
Debility at Birth	27	20	...	...	...	...	...	...	...	...	...	...	27	20	47	0·23
Atelectasis	3	1	...	...	...	...	...	...	...	...	...	...	3	1	4	0·02
Congenital Defects	11	7	...	...	...	...	...	...	...	...	...	...	11	7	18	0·09
Want of Breast Milk	3	4	...	...	...	...	...	...	...	...	...	...	3	4	7	0·03
Atrophy, Debility, Marasmus	10	6	2	2	...	...	...	...	1	...	1	...	14	8	22	0·11
Dentition	3	5	2	...	...	...	...	...	...	...	...	...	5	5	10	0·05
Rickets	3	...	2	3	...	...	...	...	...	...	...	...	5	3	8	0·04
Old Age, Senile Decay	...	...	...	...	...	...	...	...	1	3	51	81	52	84	136	0·68
Convulsions	26	18	3	1	...	...	...	...	7	9	5	4	29	19	48	0·24
Meningitis	7	4	2	4	2	5	...	2	1	2	...	...	12	17	29	0·14
Encephalitis	...	...	...	...	...	...	1	...	...	1	1	...	2	1	3	0·01
Apoplexy	...	...	...	...	...	...	...	...	7	9	5	4	12	13	25	0·12
Softening of Brain	...	...	...	...	...	...	...	...	1	3	3	4	3	8	11	0·05
Hemiplegia, Brain Paralysis	...	...	...	...	...	...	...	...	...	1	1	3	7	4	11	0·05
General Paralysis of Insane	...	...	...	...	...	...	...	...	5	...	...	...	5	5	5	0·02
Other forms of Insanity	...	...	...	...	...	...	...	...	14	2	3	1	17	3	20	0·10
Chorea	1	...	...	...	1	...	...	...	...	...	...	...	1	1	2	0·01
Cerebral Tumour	...	...	...	...	1	...	...	...	1	...	...	...	2	...	2	0·01
Epilepsy	...	...	...	...	...	...	...	...	3	3	1	...	4	3	7	0·03
Locomotor Ataxy	...	...	...	...	...	...	...	...	1	1	...	1	1	2	3	0·01
Paraplegia, Diseases of Spinal Cord	...	1	...	...	...	...	1	...	2	3	5	7	9	10	19	0·08
Other and ill-defined Diseases of Brain or Nervous System	2	1	...	...	...	...	2	1	1	4	2	3	7	9	16	0·08
Otitis, Otorrhœa	...	...	...	...	...	1	...	...	1	...	...	...	...	2	2	0·01
Diseases of Nose, Epistaxis	...	...	...	...	...	...	1	1	1	...	...	...	2	1	3	0·01
Diseases of Eye, Ophthalmia	...	...	...	...	...	...	...	...	1	1	...	...	1	1	2	0·01
Pericarditis	...	...	...	1	...	1	...	...	...	...	...	...	...	2	2	0·01
Endocarditis, Valvular Diseases of the Heart	...	...	1	1	1	1	2	6	21	21	7	12	32	41	73	0·36
Hypertrophy of Heart	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	0·00
Angina Pectoris	...	...	...	...	...	...	...	...	2	3	...	...	2	3	5	0·02
Aneurism	...	...	...	...	...	...	...	...	4	...	1	...	5	...	5	0·02
Senile Gangrene	...	...	...	...	...	...	...	...	...	...	...	2	...	2	2	0·01
Embolism, Thrombosis	...	...	...	...	...	...	...	...	4	...	4	5	8	5	13	0·06
Phlebitis	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	0·01
Other and ill-defined Diseases of Heart and Circulatory System	...	4	...	...	3	1	3	5	73	59	35	39	114	108	222	1·11
Laryngitis	...	...	2	1	...	...	...	...	1	...	...	...	3	1	4	0·02
Other Diseases of Larynx and Trachea	1	1	...	1	...	...	...	...	...	...	...	...	1	2	3	0·01
Acute Bronchitis	25	21	8	3	1	1	...	...	2	2	4	2	40	29	69	0·34
Chronic Bronchitis	...	...	...	...	...	...	...	...	23	13	18	29	41	42	83	0·41
Lobar, Croupous, Acute Pleuro-Pneumonia	1	1	1	...	...	1	1	2	19	6	3	2	25	12	37	0·18
Lobular, Catarrhal, Broncho-Pneumonia	17	10	16	9	...	...	...	1	4	1	2	3	39	24	63	0·31
Pneumonia, form not stated	11	6	4	7	3	3	2	4	41	14	12	6	73	40	113	0·56
Emphysema, Asthma	...	...	1	...	...	...	...	...	8	2	...	1	9	3	12	0·06
Pleurisy	1	...	1	4	...	...	...	...	3	2	1	1	6	7	13	0·06
Other and ill-defined Diseases of Respiratory System	1	...	...	...	...	...	...	...	...	...	...	1	1	1	2	0·01
Diseases of Mouth and Annexa	...	...	1	...	...	...	1	...	...	...	1	...	2	1	3	0·01
Diseases of Œsophagus	...	...	...	...	...	...	...	...	1	1	...	...	1	1	2	0·01
Ulcer of Stomach and Duodenum	...	...	...	...	...	...	1	1	5	7	...	...	6	8	14	0·07
Other Diseases of Stomach	7	6	3	...	...	...	...	...	3	4	...	5	13	15	28	0·14
Enteritis	9	13	2	4	1	...	...	...	2	2	1	1	15	20	35	0·17
Appendicitis	...	...	...	3	...	2	1	...	...	...	1	...	6	1	7	0·03
Obstruction of Intestine	4	1	...	...	...	1	...	...	3	6	3	6	11	13	24	0·12
Other Diseases of Intestine	...	...	...	...	...	...	...	...	2	...	...	...	2	...	2	0·01
Cirrhosis of Liver	...	...	...	...	...	...	...	...	6	5	1	1	7	6	13	0·06
Other Diseases of Liver	...	1	...	...	...	...	...	...	3	5	...	3	3	9	12	0·06
Peritonitis	...	...	1	...	...	...	1	2	4	...	1	2	7	7	9	0·04
Other and ill-defined Diseases of Digestive System	1	...	...	...	...	...	...	2	2	2	1	...	4	2	6	0·03
Diseases of Lymphatic System and Ductless Glands	...	...	...	...	...	...	1	...	2	...	...	...	...	3	3	0·01
Acute Nephritis	...	...	...	2	...	1	1	1	4	3	2	...	7	7	14	0·07
Bright's Disease	1	...	...	...	...	...	...	1	15	8	3	2	19	11	30	0·15
Diseases of Bladder and Prostate	...	...	...	...	...	...	...	...	1	...	9	2	10	2	12	0·06
Other and ill-defined Diseases of Urinary System	1	...	...	...	...	...	...	...	2	2	2	1	5	3	8	0·04
Diseases of Testis and Penis	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
Diseases of Ovaries	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	0·00
Diseases of Uterus and Appendages	...	...	...	...	...	...	...	...	...	...	...	1	...	5	5	0·02
Abortion, Miscarriage	...	...	...	...	...	...	...	...	2	...	...	...	2	2	2	0·01
Puerperal Convulsions	...	...	...	...	...	...	...	...	1	...	...	...	1	1	0	0·00
Placenta Prævia, Flooding, Accidental Hæmorrhage	...	...	...	...	...	...	...	...	2	...	...	...	2	2	1	0·01
Puerperal Thrombosis	...	...	...	...	...	...	...	...	1	...	...	...	1	1	1	0·00
Other & ill-defined Accidents & Diseases of Pregnancy & Childbirth	...	...	...	...	...	...	...	...	6	...	...	...	6	6	6	0·03
Arthritis, Otitis, Periostitis	...	1	...	...	1	...	...	...	...	1	...	1	1	3	4	0·02
Other and ill-defined Diseases of Osseous System	...	...	1	...	1	...	...	...	...	...	...	...	2	...	2	0·01
Ulcer, Bedsore	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	0·00
Eczema	2	...	...	...	...	...	...	...	...	...	...	...	2	...	2	0·01
Pemphigus	1	2	...	...	...	...	...	...	...	...	...	...	1	2	3	0·01
By Accident or Negligence	6	1	4	6	10	1	4	...	38	9	5	8	67	25	92	0·46
Manslaughter	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
Homicide	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
Suicides	...	...	...	...	...	...	...	...	3	3	...	...	3	3	6	0·03
Other ill-defined and not Specified Causes	...	1	...	...	...	...	...	...	1	...	2	1	3	1	4	0·02
All Causes	310	227	104	99	44	58	58	71	509	373	222	281	1247	1109	2356	11·8